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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1955

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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1955

ELMER E. ROBINSON	MAYOR
THOMAS A. BROOKS	CHIEF ADMINISTRATIVE OFFICER
SHERMAN P. DUCKEL	DIRECTOR OF PUBLIC WORKS

SAN FRANCISCO - CITY BY THE GOLDEN GATE

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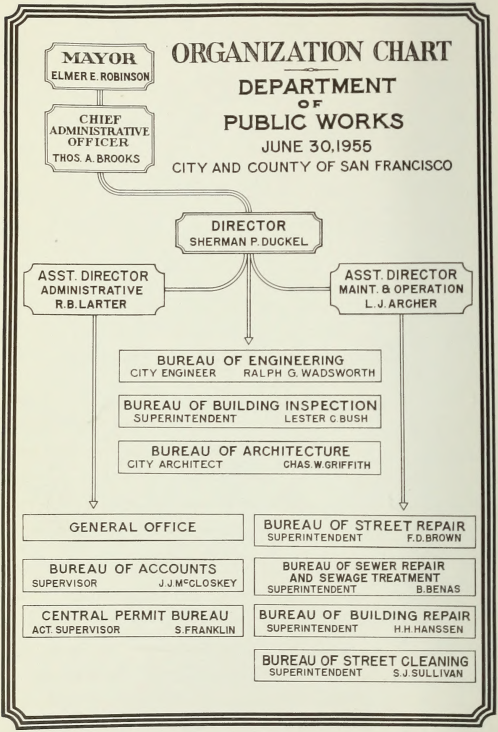
SAN FRANCISCO - CITY BY THE GOLDEN GATE

ORGANIZATION CHART

DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1955

CITY AND COUNTY OF SAN FRANCISCO


MAYOR
ELMER E. ROBINSON
CHIEF ADMINISTRATIVE OFFICER
THOS. A. BROOKS
DIRECTOR
SHERMAN P. DUCKEL
ASST. DIRECTOR
ADMINISTRATIVE
R.B. LARTER
ASST. DIRECTOR
MAINT. & OPERATION
L. J. ARCHER
BUREAU OF ENGINEERING
CITY ENGINEER RALPH G. WADSWORTH
BUREAU OF BUILDING INSPECTION
SUPERINTENDENT LESTER C. BUSH
BUREAU OF ARCHITECTURE
CITY ARCHITECT CHAS. W. GRIFFITH
GENERAL OFFICE
BUREAU OF ACCOUNTS
SUPERVISOR J. J. McCLOSKEY
CENTRAL PERMIT BUREAU
ACT. SUPERVISOR S. FRANKLIN
BUREAU OF STREET REPAIR
SUPERINTENDENT F. D. BROWN
BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
SUPERINTENDENT B. BENAS
BUREAU OF BUILDING REPAIR
SUPERINTENDENT H. H. HANSSEN
BUREAU OF STREET CLEANING
SUPERINTENDENT S. J. SULLIVAN

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE
DIRECTOR OF PUBLIC WORKS

260 CITY HALL
SAN FRANCISCO 2,
CALIFORNIA

November 18, 1955

Annual Report
1954-1955

Honorable Thomas A. Brooks
Chief Administrative Officer
City and County of San Francisco

Dear Mr. Brooks:

I submit herewith, in accordance with the provisions of Section 20 of the Charter of the City and County of San Francisco, the Annual Report of the Department of Public Works for the fiscal year ending June 30, 1955.

As in the past, the report is divided into nine sections covering the activities of the nine bureaus of the department. In the back of the report, under Appendixes I and II, are summaries of current contract data. Operational data on our Sewage Treatment Plants is to be compiled under a separate report which will be made available to those interested.

During the past year there has been a considerable change in the top personnel of the department. Mr. F.W. McKenzie, Assistant Director of Public Works, Administrative, retired on September 24, 1954 after 42 years of service. Mr. E.F. Muheim, Superintendent of the Bureau of Sewer Repair, retired on September 1, 1954 after 40 years of service. Mr. H.H. Hanssen, Superintendent of the Bureau of Building Repair, retired on January 1, 1955 after 30 years of service and Mr. S.J. Rosenblum, Supervisor of the Central Permit Bureau, passed away on March 1, 1955 after 40 years of service. All of these men have served the City faithfully and well and it is needless to say that they are missed by all who worked with them. All of these positions have now been filled through competitive examinations.

The approval of San Francisco Hospital and Laguna Honda Home Bond Issues totaling $11,305,000.00 in addition to the Bond Issue of $3,275,000.00 for the Civic Center Plaza Exhibit Hall have added to the work load of the Department. It is becoming more difficult to interest professional engineers in City employment and very few are entering City service with a result that the entrance grade positions cannot be filled.

Since the start of the Safety Program in March of 1952 there has been a definite reduction in the number of lost-time accidents of one or more days subsequent to the date of the accident. In 1952-53 there were 97 lost-time accidents; 82 in 1953-54; and 86 in 1954-55.

The actual total sum paid by the City in sick leave, compensation and medical expenses during the past two fiscal years has been reduced about 40%, i.e. 1953-54 - $38,203 and 1954-55 - $23,175. This would indicate that the increase in safety consciousness of personnel has reduced the severity of the lost-time accidents.

The 24 mobile radio sets used by the Department have greatly improved the efficiency in the control of personnel in the operating Bureaus. There were 10,334 radio calls logged during the fiscal year.

I believe that all bureaus have carried on their assigned functions in an efficient manner, and the detailed listing of these functions is contained in the following reports.

I would thank all Bureau heads and their staffs for their usual fine co-operation during the past year and also Mr. L.J. Archer and Mr. R.B. Larter, Assistant Directors, for their great help in the operation of this department. I am again very grateful to you, Mr. Brooks, for your most generous assistance and support in all matters pertaining to the department.

Very truly yours,

Sherman P. Duckel

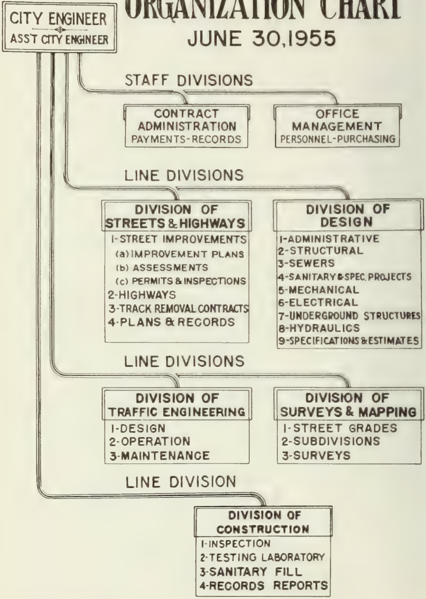
Sherman P. Duckel, Director
Department of Public Works

BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART

JUNE 30, 1955



CITY ENGINEER

ASS'T CITY ENGINEER

STAFF DIVISIONS

- **CONTRACT ADMINISTRATION**
  - PAYMENTS-RECORDS
- **OFFICE MANAGEMENT**
  - PERSONNEL-PURCHASING

LINE DIVISIONS

- **DIVISION OF STREETS & HIGHWAYS**
  - 1-STREET IMPROVEMENTS
    - (a) IMPROVEMENT PLANS
    - (b) ASSESSMENTS
    - (c) PERMITS & INSPECTIONS
  - 2-HIGHWAYS
  - 3-TRACK REMOVAL CONTRACTS
  - 4-PLANS & RECORDS
- **DIVISION OF DESIGN**
  - 1-ADMINISTRATIVE
  - 2-STRUCTURAL
  - 3-SEWERS
  - 4-SANITARY & SPEC. PROJECTS
  - 5-MECHANICAL
  - 6-ELECTRICAL
  - 7-UNDERGROUND STRUCTURES
  - 8-HYDRAULICS
  - 9-SPECIFICATIONS & ESTIMATES

LINE DIVISIONS

- **DIVISION OF TRAFFIC ENGINEERING**
  - 1-DESIGN
  - 2-OPERATION
  - 3-MAINTENANCE
- **DIVISION OF SURVEYS & MAPPING**
  - 1-STREET GRADES
  - 2-SUBDIVISIONS
  - 3-SURVEYS

LINE DIVISION

- **DIVISION OF CONSTRUCTION**
  - 1-INSPECTION
  - 2-TESTING LABORATORY
  - 3-SANITARY FILL
  - 4-RECORDS REPORTS

BUREAU OF ENGINEERING

Ralph G. Wadsworth, City Engineer

GENERAL REVIEW OF YEAR'S WORK

The wide variety of functions of the Bureau of Engineering is illustrated by the Organization Chart on the opposite page. A major part of the Bureau's work consists of preparing plans and specifications and supervising construction of various improvements under the jurisdiction of the Department of Public Works. The contracts supervised are largely in connection with streets, sewers and traffic signals but during the past year a number of important projects were undertaken relating to public buildings and facilities of City Departments other than the Department of Public Works. In addition to contract work the Bureau performs many services such as traffic engineering investigations, maintenance of maps and records for public information, surveys for future improvements, inspection of the condition of streets and sidewalks, and investigations of various projects and proposals.

HIGH LIGHTS OF THE PAST YEAR

The supervision of sewage treatment plant operation was transferred from the Bureau of Engineering to the Bureau of Sewer Repair and Sewage Treatment on December 3, 1954, although the administrative management remained with the Bureau of Engineering until the end of the fiscal year. The Division of Traffic Engineering operated under a separate budget for the first time, with fixed limits on expenditures for payroll, supplies and miscellaneous expense. The Bureau was unable to expand its design forces because Civil Service lists of new eligible personnel were inadequate to take care of losses caused by resignations and retirements. In order to permit more rapid prosecution of the highway design program, the Director of Public Works awarded an engineering contract to a private engineering firm covering the City's portion of the proposed Southern Freeway.

CONTRACT VOLUME

Table I summarizes the contracts which were awarded or under way during the fiscal year under plans and specifications prepared by the Bureau. This summary is supplemented by separate tables in Appendix I which list all of the contracts for each of the various types of construction. Table I also indicates the estimated amount expended during the year on contracts under way, some of which had been awarded during the preceding year but not completed until the current year.

The number of contracts awarded was slightly higher than last year and above the average for the past three years. The value of the contracts awarded, namely $4,625,819, was about 20% higher than during the preceding year and only slightly below the average for the past four years. The figures for contracts awarded and amounts expended are shown graphically in Figure 1 for a ten-year period. The locations of most of the contracts awarded are indicated in Figure 2.

TABLE I
CURRENT CONTRACT DATA SUMMARY
SHOWING ALL CONTRACT WORK AWARDED OR UNDER WAY
JULY 1, 1954 - JUNE 30, 1955

TABLE	TYPE OF CONSTRUCTION	NO.	CONTRACTS AWARDED AGGREGATE VALUE	AMOUNT EXPENDED FISCAL YEAR 1954-1955
A	Major Thoroughfares	7	$ 741,899.59	$ 319,301.09
B-1	Streets - Private Contracts	26	411,120.00	212,611.00
B-2	Streets - Assessment Proceedings	18	246,060.34	134,530.67
B-3	Streets - Public Contract City Pay	15	404,758.00	369,651.65
B-4	Streets - Car Track Removal	5	825,017.18	871,863.98
C	Traffic Signals and Channelization	5	314,127.60	312,632.58
D-1	Sewers - Pipe, Vitrified Clay and Concrete	7	243,350.01	440,560.30
D-2	Sewers - Concrete Monolithic	3	1,005,461.90	401,920.34
E	Miscellaneous	32	434,025.06	799,052.79
	TOTALS	118	$4,625,819.68	$3,862,124.40

CONTRACTS AWARDED AND PAYMENTS MADE

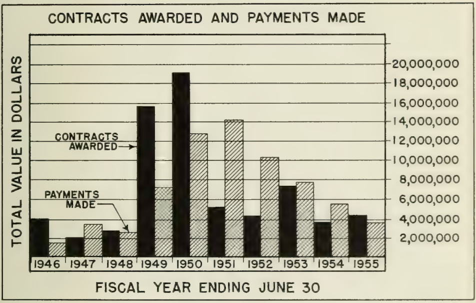


FIG. 1

PUBLIC BUILDING CONTRACTS

The contract summary in Table I and the detailed listing contained in Appendix I include a number of contracts for improvement of public buildings and other facilities, such as a new electric service for the City Hall, re-tubing a boiler at the Hall of Justice, improvement of the sewage treatment plant at the County Jail, a tool shed for the Recreation and Park Department, installation of air raid sirens, replacement of elevator doors at the Civic Auditorium, installation of a new switchboard at the Public Library and other similar improvements. In addition the Bureau prepared electrical, mechanical and structural designs for the Bureau of Architecture for inclusion of certain of their contracts for reconstruction of fire houses, new improvements at San Francisco Hospital and Laguna Honda Home and structural changes at certain school buildings. The value of the construction work for which these plans were prepared amounted to about $247,000.

LOCATION OF CONTRACTS AWARDED

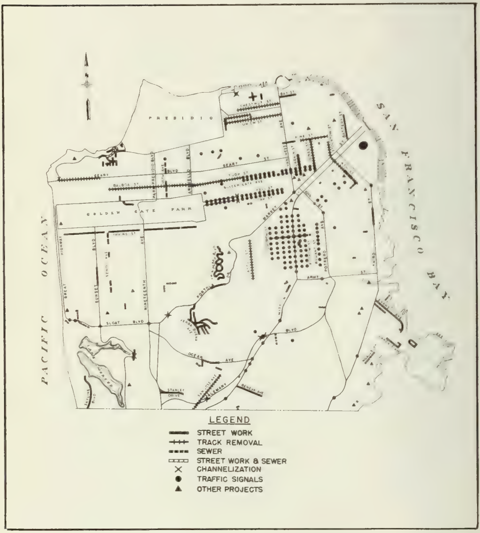


FIG. 2

FREEWAY PROGRAM

COMPLETED WORK

The State program of freeway construction within the City progressed rapidly during the year. The work on the Bayshore Freeway, now known as the James Lick Memorial Freeway was completed from Third Street near the south City limits to the San Francisco-Oakland Bay Bridge and the last unit was finally opened to traffic on June 22, 1955.

The dates on which the various units and connections were opened to traffic were as follows:

UNIT	OPENING DATE
Thirteenth Street Lateral - Westbound	March 1, 1955
Westbound "Y" Connection	March 1, 1955
Third Street to Alemany Boulevard	March 30, 1955
Fourth and Bryant Streets Off Ramp	May 26, 1955
Fourth and Harrison Streets On Ramp	May 26, 1955
Westbound Bay Bridge Connection	June 2, 1955
Eastbound Bay Bridge Connection	June 14, 1955
Eastbound "Y" Connection to 13th Street	June 14, 1955
Thirteenth Street Lateral - Eastbound	June 14, 1955
Third Street On Ramp - Southbound	June 22, 1955

The completion of the various units and connections have made the freeway more and more popular with motorists. In a series of counts taken in April, 1955, it was found that the freeway was carrying 94,000 vehicles a day with a peak-hour directional load of 6,622 vehicles at its heaviest point just north of Alemany Boulevard. The traffic diversionary action of the freeway has had drastic effects on traffic on competing surface streets reducing the volumes as much as 60% in some areas.

CITY WORK

Freeway construction in the downtown area, particularly between Division Street and Fourth Street, required a number of modifications in the City sewer system and the high pressure fire system. The Bureau of Engineering prepared the necessary plans for all such changes, and in the case of the high pressure system supervised the construction. The cost of all such changes was borne by the State Division of Highways as a part of the cost of freeway construction.

FUTURE STATE PROGRAM

Work was started in the Spring of 1955 on the first unit of The Embarcadero Freeway, extending as far as the Mission Street

PLAN OF FREEWAY SYSTEM

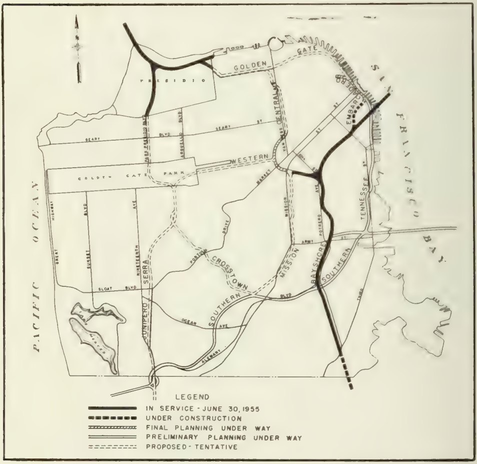


FIG. 3

intersections with Main and Beale Streets. Construction work continued southerly from Third Street to the County Line and thence across openwater into San Mateo County.

Plans were further developed for the Central Freeway as far as Franklin and Gough Streets and acquisition of necessary right-of-way was started. Preliminary planning of the Southern Freeway was well advanced.

The status of the freeway program as of June 30, 1955 is illustrated by Figure 3.

STREET AND HIGHWAY IMPROVEMENTS

During the 1954-1955 fiscal year, twenty-seven street and highway contracts were awarded at a total cost of $1,971,675. These contracts, ranging in magnitude from $1,622 for a minor widening of Powell Street near Bush Street to $348,845 for the widening and realignment of Skyline Boulevard from Lake Merced Boulevard to the County Line, accounted for the improvement of approximately 25.51 miles of city streets and highways. Gasoline taxes and bond proceeds provided the main sources of funds to finance these contracts. The various contracts are listed in Appendix I, Tables A, B-3 and B-4.

MAJOR THOROUGHFARES

Seven contracts, aggregating $741,900 were awarded for the improvement of 2.18 miles of major thoroughfares. Three of the most important of these are described briefly in the following paragraphs.

Portola Drive Realignment

This project is the second unit of a four-stage development designed to improve the alignment and increase the traffic capacity of the Market Street - Portola Drive route from Douglass Street to Sloat Boulevard. The first unit, channelization of Market Street from Douglass Street to Hattie Street, was completed last year. The remaining two units are described under the heading "Plans For Future Work."

CENTRAL FREEWAY, FIRST SECTION

Showing Off Ramp at 13th and Mission Streets

CENTRAL FREEWAY, FIRST SECTION

Structural Steel Freeway Along Division Street
in San Francisco from intersection of 11th and Bryant Streets
Looking Easterly March 21, 1955

The present work consists of realigning, regrading and channelizing the section of Portola Drive from about Clipper Street to Twin Peaks Boulevard. It will eliminate a sharp curve adjacent to Midtown Terrace and will provide safe ingress and egress for the residents of that subdivision through a properly channelized intersection. It is anticipated that this contract will be completed in September 1955.

Skyline Boulevard Widening

Skyline Boulevard is a state highway which, for many years, has been a popular route over which pleasure seeking San Franciscans have traveled to and from the recreational regions of the San Mateo County hills and beaches. It is a three-lane road from Lake Merced Boulevard in San Francisco to its junction with State Highway Route 1, about three-quarters of a mile south of the San Francisco - San Mateo County Line.

Extensive residential developments south of the county line have recently made this highway a major route of commuter access to the City. As the volume of traffic increased, the hazards which are inherent in a three-lane highway were accentuated and, in consultation with the State Division of Highways, a modernization program was adopted. Plans were prepared by the Bureau of Engineering for San Francisco portion of the improvement and on June 10, 1955 a contract was awarded by the City for the construction of a four-lane divided highway between Lake Merced Boulevard and the county line. In the near future the State Division of Highways will receive bids for a similar improvement of the portion of the Boulevard south of the county line.

Thirteenth Street Widening

In order to expedite the opening of the Thirteenth Street Lateral of the James Lick Memorial Freeway, the proposed widening of Thirteenth Street was divided into two contracts. The contract for the first section, from Mission Street to South Van Ness Avenue, was completed on March 1, 1955 to conform with the opening of the freeway. At the present time, only that portion of the roadway which is required to provide access to the on-ramp on the elevated freeway is open for traffic. The remainder of the roadway is blocked off by temporary wooden curbs and is being utilized for parking.

Bids will be received for construction of the second section on July 6, 1955. When the project is completed it will provide a six-lane divided thoroughfare connecting Duboce Avenue on the west with Division Street on the east. A unique feature of this project is that, for practically its entire length, the surface street runs under the structure of the elevated freeway.

STREET IMPROVEMENTS

The total value of the fifteen contracts awarded this year for various types of street improvements, in addition to the above described major thoroughfare improvements, amounted to $404,758. These contracts included initial street work in front of city property, resurfacing old pavements and the replacement of obsolete brick and basalt block paving with modern type pavement. They account for the improvement of 17.12 miles of City Streets.

TRACK REMOVAL AND STREET RECONSTRUCTION

As mentioned in the last Annual Report, the final contract of the original 1947 track removal program was awarded on June 2, 1954 and thereafter approval was obtained to undertake the removal of an additional 6.21 miles of tracks which had been abandoned subsequent to approval of the 1947 Street Improvement Bond Issue.

During the fiscal year ending June 30, 1955, five track removal contracts totaling $825,217 were awarded, one of which has been completed and four are still under way. The aggregate street length covered was 6.21 miles, a figure which by coincidence agrees with the additional mileage authorized last year. A further expansion of the program has resulted from the abandonment of portions of the cable railway as approved by the voters in June and November 1954. In February 1955 the Board of Supervisors authorized the extension of the track removal program to include the removal of abandoned cable car tracks on O'Farrell, Jones and Pine Streets and portions of Hyde and California Streets aggregating 4.92 miles in length.

To date tracks have been removed from 104.32 miles of city streets and work is under way on 3.74 additional miles. When the work now under way is completed, only 6.79 miles of abandoned track will remain to be removed and it is expected that this will have been accomplished by December 1956. The status of the track removal program on June 30, 1955 is shown on Figure 4.

TRACK REMOVAL PROGRAM TO JUNE 30, 1955

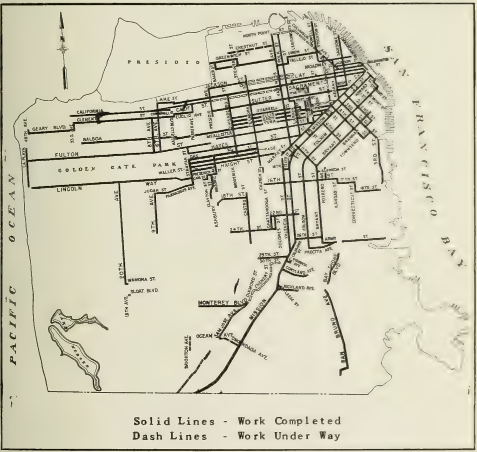


FIG. 4

PLANS FOR FUTURE WORK

Plans for a number of street and highway improvements have been completed or are nearing completion and several will be under contract in the coming fiscal year. The more important ones are shown below, in the approximate order of priority, together with their estimated construction costs:

Market Street: 18th-Corbett	Widen and Realign	$1,114,000
Portola Drive: Evelyn-Sloat Blvd.	Widen and Realign	640,000
Great Highway and Lincoln Way	Channelization	104,000
Silver Avenue: Mission-Palou	Reconstruct	220,000
Stockton Street: Tunnel-Columbus	Track Removal	80,000
Columbus Avenue: Stockton-North Point) North Point: Columbus-Van Ness Ave.)	Track Removal	180,000
California Street: Van Ness-Presidio	Track Removal	125,000
Total Preliminary Estimated Cost		$2,463,000

In addition to the above, preliminary planning has been started for the City's section of the Southern Freeway between James Lick Memorial Freeway and the proposed Southern Crossing of the Bay. This work, which is being performed under contract by the firm of DeLeuw, Cather and Company, Engineering Consultants, is now about 36% completed. It is anticipated that the preliminary plans and estimates will be submitted for approval about November 1956, and that shortly thereafter work will be authorized on the preparation of detailed plans and specifications.

STREET IMPROVEMENTS FINANCED BY PROPERTY OWNERS

All street construction which was financed in whole or in part by the owners of fronting property and for which permits were granted or public contracts awarded during the 1954-1955 fiscal year together with those authorized but not completed in the previous fiscal year, are listed in detail in Appendix I, Tables B-1 and B-2.

PRIVATE CONTRACTS

Table B-1 lists the street improvements which were constructed under private contracts negotiated directly between the property owners and contractors of their own choice. The City's only function in private contract work is to grant the permit, furnish the plans and specifications, and inspect the work during construction. Twenty-six permits for private contracts aggregating $411,120 were issued during the year. This represents an increase in value over the previous year of about 130%.

ASSESSMENT CONTRACTS

Table B-2 lists similar street projects which were done under public contract awarded by the City, the cost being assessed in whole or in part against the property owners benefited by the work. This procedure is in accordance with the Street Improvement Ordinance of 1934 which provides for preparation of plans and specifications, notification of property owners, public hearings, awarding of contract, supervision of construction, and final levy of assessment on the property. In many cases, City Aid is extended in order to reduce individual assessments to the legal limit which is defined as two and one-half times the lot valuation. The City also contributes funds according to established rules in order to prevent excessive assessments on residential corners, irregular lots and property having disproportionately long frontage. Although only three more assessment contracts were awarded than last year, the total value of the contracts was almost doubled.

Table II indicates the volume of work carried on during the year in connection with assessment proceedings for street improvements.

TABLE II

Street Work Proceedings Under
The Street Improvement Ordinance of 1934

Resolutions of Intention passed	21
Street Improvement Projects recommended to the Board of Supervisors	18
Notices of Street Improvement posted	180
Notices of Resolution of Intention mailed	274
Ordinances ordering performance of street improvements passed	16
Proposals for street improvements published	17
Awards of Contract for street improvements	18
Notices of Recordation posted	153
Notices of Recordation mailed	267
Private Contracts granted	26
Assessments issued (total amount $132,020.51)	15
Bond payments received (total amount $8,309.45)	94

STREET DEDICATIONS AND CHANGES

Numerous actions taken by the City during the year with reference to subdivisions, street grades, sidewalk widths and street closings were based on investigations and recommendations of the Bureau of Engineering and in many cases involved preparation of specific descriptions by the Surveys and Mapping Division of the Bureau.

SUBDIVISION MAPS

The following tentative subdivision maps were received and reported on:

Wildwood Park Subdivision, located northerly of Ocean and Faxon Avenues
Panorama Terrace Subdivision No. 1, on the southerly slope of Twin Peaks
Midtown Terrace Subdivision No. 4, on the westerly slope of Twin Peaks

Two subdivision maps approved by the City Engineer and the Director of Public Works and filed in the office of the Recorder were:

Talbert Court, west of Bayshore Boulevard near the county line
Potrero Annex Housing Project, on top of Potrero Hill

STREET OPENINGS

Maps approved and recorded, providing for the opening and extension of streets, were as follows:

Watchman Way	Missouri Street to its southerly termination	Opening
Turner Terrace	Missouri Street to its southerly termination	Opening
Missouri Street	22nd Street to 23rd Street	Extension
Talbert Street	Visitacion Avenue to its northerly termination	Extension

STREETS VACATED

The following streets were vacated between the limits noted:

Tehama Street	162.21 ft. to 275 ft. southerly of Second Street
Colby Street	Dwight Street to 100 ft. southerly
Homans Street	Visitacion Avenue to its northerly termination
	Visitacion Avenue to the County Line
Hawes Street	100 ft. southerly of Innes Avenue to 740 ft. southerly
Griffith Street	Center of La Salle Avenue to northerly line of Kirkwood Avenue
Fitch Street	Northerly line of Kirkwood Avenue to 60 ft. northerly of Jerrold Avenue
La Salle Avenue	Easterly line of Hawes Street to westerly line of Griffith Street
Kirkwood Avenue	Northerly half between Griffith Street and center of Fitch Street
Newcomb Avenue	Southerly half from Griffith Street to 375 ft. westerly
De Boom Street	250 ft. northerly of Second Street to its northerly termination
Mangels Avenue	Northerly and southerly 12.5 ft. between Congo Street and Detroit Street
Second Avenue	Irving Street to Parnassus Avenue
Cityview Way	Panorama Drive to its westerly termination
Bright Street	Stanley Street to its southerly termination
Stanley Street	Bright Street to its westerly termination

STREET GRADES ESTABLISHED

New grades were established on the following streets:

Folsom Street	Southerly line of Powhattan Avenue to southerly boundary of Bernal Heights Park
Banks Street	Southerly line of Powhattan Avenue to southerly boundary of Bernal Heights Park
Prentiss Street	Southerly line of Powhattan Avenue to southerly boundary of Bernal Heights Park
Rosenkranz Street	Southerly line of Powhattan Avenue to southerly boundary of Bernal Heights Park
Oxford Street	125 ft. southerly from Burrows Street to the northerly line of Bacon Street
Bacon Street	Westerly line of Harvard Street to the westerly line of Cambridge Street

STREET GRADES CHANGED

Official grades were modified on the following streets:

Stanley Street	Westerly line of Orizaba Avenue to the easterly line of Bright Street
Bright Street	Northerly line of Stanley Street to 244 ft. northerly

SIDEWALK WIDTHS CHANGED

Official sidewalk widths were changed on the following streets:

Scott Street	Westerly side between Post Street and Sutter Street
Market Street	Between Danvers Street and Nineteenth Street
Portola Drive	Between Sydney Way and Evelyn Way
Powell Street	Easterly side between Anson Place and Bush Street
Thornton Avenue	Southerly side between San Bruno Avenue and 85 ft. easterly
Dwight Street	Southerly side between Goettingen Street and Brussels Street

STREET MILEAGES

Streets and highways in the City as of June 30, 1955 were classified as follows:

CLASS	MILES
State Highways	31.42
Major Streets	184.90
Other Improved Streets	600.13
TOTAL IMPROVED	816.45
Unimproved Streets	99.00
TOTAL DEDICATED	915.45

STREET AND SIDEWALK INSPECTION

A staff of six inspectors was employed during the fiscal year 1954-1955 on supervision of street excavations, inspection of sidewalks, and reports and investigations in connection therewith. On the average, two inspectors were engaged continuously on sidewalk inspections. They worked in portions of the following districts:

Western Addition
Central 50 Vara
Richmond
Civic Center
Mission
Glen Park
Bay View
Portola
Ocean View
Potrero
Sunset

In addition, many special sidewalk and driveway inspections were made in connection with the various track removal and pavement reconstruction contracts and with the Department's street resurfacing program in widely scattered locations throughout the city. Combining sidewalk inspection with pavement improvement results in securing a completely renovated street from property line to property line. The combined coverage of all sidewalk inspections totalled 29,103 lot frontages.

Efforts were continued to secure needed new sidewalk construction in all districts and as a result of this activity 125,597 square feet of new walks were installed during this fiscal year by the responsible property owners.

A recently added activity of this Section is the implementation of Defective Sidewalk Repair Ordinance No. 9046, approved March 23, 1955.

This new Ordinance provides that the Department of Public Works shall repair a defective sidewalk in cases where the owner, upon notification, has failed and neglected to do so. The cost of the repair is an obligation owed to the City by the owner of the adjacent property and secured by a lien on the lot in the event the amount due is not paid.

This Section prepared the necessary forms and records and will make the follow-up on each step of the notification and repair procedure.

Funds for this work have been provided by the Delinquent Sidewalk Repair Revolving Fund to cover initially the cost of making the repairs and the fund is to be replenished by all monies paid or collected for the sidewalk repairs made.

Service of notices has already commenced on some delinquent repairs and this new procedure will provide the enforcement control so needed in the past.

Various street maintenance inspections and permit investigations were made by four inspectors, the major type being utility excavations, tank installations, driveways, construction use of street space, pavement defects, house movings, blasting, and complaint and claims investigations. Activities are illustrated by the following summary:

TABLE III

Inspections, Notices, Permits and Investigations

Curb lowering permits and inspections	866
Preliminary Sidewalk repair notices	2,684
Formal Notices to construct or repair sidewalks	3,072
Notices to remove obstructions, oil, etc.	747
Notices to replace side sewer covers	956
Street Space permits and inspections	3,333
Sidewalk tank excavation permits and inspections	299
House moving permits and inspections	6
Defects in pavements reported	1,941
Damaged signs reported	408
Excavation permits approved	12,309
Excavation repaving inspected	3,884
Notices of Improvements Posted	494
State Encroachment Permits obtained	65
Claims investigations and inspections	443
Special investigations	3,628
Personal and telephone calls of complaints or for information	14,222
Citations Requested	15
Building Permit Driveway plans checked	601

DAMAGE CLAIMS

The Bureau investigated 158 damage claims which had been filed against the Department of Public Works during the fiscal year 1954-1955. All were based on accidents, usually falls, which occurred on streets or sidewalks. They were classified as to cause as follows:

11 due to Contractor's operations
17 due to construction work by utilities
44 due to street conditions
67 occurred on sidewalks
7 occurred in bus zones
12 involved property damage of various types to automobiles, buildings, etc.

Of the 158 claims, 19 involved only property damage. In the remaining 139 cases, the claiments were classified as follows:

105 female pedestrians
19 male pedestrians
10 male auto drivers
5 female auto drivers

Under present law, damages due to defective pavements or sidewalks would be the responsibility of the Department of Public Works, if negligence in making repairs could be shown. A full report on each claim was made for the City Attorney, accompanied by photographs when appropriate.

LANDSLIDE CORRECTION

EL CAMINO DEL MAR

The westerly slide at El Camino Del Mar near Lands End remained stable throughout the year and showed no appreciable movement. However the easterly slide directly below the Fort Miley Veterans Hospital continued to move. As a further corrective measure 10,000 cubic yards of material was removed and hauled away to reduce the sliding load and a vertical drain shaft, tapped by a horizontal outlet to the north, was sunk to hasten drainage of the underlying formation. Nonetheless the slide was regenerated by the winter rains and this scenic boulevard became impassable and was closed to traffic in January 1955. Plans for opening a temporary roadway across the slide area were under way at the close of the fiscal year.

BRET HARTE SCHOOL SLIDE

At the Bret Harte School slide at Ingerson Avenue, test borings were made to determine the best means of regrading and stabilizing this area which suffered considerable displacement during the previous winter. Subsequently during 1954, drains both vertical and horizontal, were drilled to accelerate the dewatering of the sliding mass. In addition the area immediately above the school was regraded to a flatter slope while the portion in Ingerson Avenue was terraced to give a two-level street thereby resulting in the removal of a considerable weight of material from the slide area. Since then, continued observations indicate only such minor movement and settlement as can perhaps be attributed to drying and shrinkage and it is anticipated that, after the installation of a small deepwell pump below the reach of the gravity drains, it will be safe to undertake the paving of the Ingerson Avenue roadways. Investigations were made of alleged damage to adjacent properties and reports were submitted to the City Attorney for use in evaluating damage claims.

PARKER AVENUE

No work was needed at the Parker Avenue slide between Turk and Anza Streets though surveys were made for the detection of movement. This was of such small and decreasing magnitude that it was concluded to be no longer necessary to prohibit building on the adjacent properties, provided the foundations were given special consideration. The original slide at this location occurred in December 1935.

SURVEYS AND MAPPING

The Division of Surveys and Mapping employed five field parties in the past year. Six men were employed in the office.

NUMBER OF SURVEYS

A total of 250 separate surveys were undertaken as follows:

Public Improvement Surveys		
Public and Private Contracts	44	
City Pay Contracts	199	243
Lot Surveys		
For City Architect		7
Total Number of Surveys		250
Survey fees received during the year amounted to		$8,810.00

SURVEY MILEAGE

Survey lines run are segregated by type of work as follows:

TYPE OF SURVEY	MILES
Lots	1.5
Sewers	11.2
Cross Sections	30.8
Surveys in Slide Areas	2.2
Subsidence Levels	2.2
Monument Lines	9.0
Topography	13.8
New Streets	1.7
Line and Grade for Curb and Paving	23.4
Track Removal projects	5.3
Reference Survey Cuts	7.7
Total length of surveys run	108.8

PRECISE LEVEL SURVEYS

Precise level lines to set new bench marks or to replace those disturbed by track removal and street reconstruction were run where required throughout the City aggregating 33.6 miles in length. The number of precise bench marks established was 2,230.

OFFICE WORK

Ten maps of school sites, playgrounds and fire house sites were prepared showing precise boundaries and location of improvements and utilities. A contour map of five-foot intervals was made of the area bounded by Oakdale Avenue, Industrial Street, Silver Avenue and Bay Shore Boulevard for use in the design of the proposed Southern Freeway.

Computations, preliminary drawings and deed descriptions for the acquisition of property were made for numerous projects including Market Street Widening, Portola Drive, Candlestick Sewer Tunnel, Lake Merced Boulevard, Clarendon Avenue, Stanley Drive, Olympia Way, and Thomas More Way.

Three tentative subdivision maps were examined and checked for correctness of street widths and grades. Two final subdivision maps submitted for filing in the Public Records were checked for correctness of lot line dimensions and exterior boundaries.

Twenty-four reports were made to the City Attorney's office on the City's interest in property involved in actions to quiet title and on the correctness of the boundary descriptions given.

Seven appeals from decisions of the City Planning Commission were checked to determine whether the signatures represented at least twenty percent of the owners within a radius of 300 feet of the property involved so as to quality for consideration by the Board of Supervisors.

GROUND SUBSIDENCE IN DOWNTOWN AREA

During the latter part of June 1955 precise levels were run along Townsend Street from Third Street to Eighth Street and also on the easterly portions of Pine, California, Sacramento, Clay and Market Streets, for the purpose of determining what change in the rate of subsidence might have occurred in these areas.

The levels were run from well established, permanent bench marks and all level circuits were closed with an error varying from 0.010 feet to 0.018 feet, depending upon the number of turns. Elevations were taken on marks previously made on curbstones on both sides of each street at intervals of about 100 feet. By comparing the elevations so obtained with elevations taken on the same points in March 1953, the change of elevation at each point was determined. The average of the changes on all the points within a block was then divided by 2.25 to give the average annual change in elevation within each block for the period March 1953 to June 1955.

These figures are shown in the last column of Table IV. It will be noted that all of the Average Annual Changes are quite small, a large part of them being less than the probable error in the survey. Surprisingly, 15 of the 26 blocks listed show a rise rather than a subsidence. In 3 of the 15 instances, the indicated rise of 0.009 feet to 0.013 feet seems to be large enough to be significant and leads to speculation as to whether there is some explanation other than survey error.

TABLE IV
CHANGES IN CURB ELEVATIONS

+ Indicates rise — - indicates subsidence

STREET	FROM	TO	AVERAGE ANNUAL CHANGE IN FEET PER YEAR	
			PRIOR TO 1947	1953-1955
Clay	Montgomery	Sansome	-.013	-.001
	Sansome	Battery	-.002	+.003
	Battery	Front	-.010	-.009
	Front	Davis	-.008	-.009
	Davis	Drumm	-.009	-.014
	Drumm	Embarcadero	-.040	-.018
Sacramento	Montgomery	Sansome	-.010	+.001
	Sansome	Battery	-.013	.000
	Battery	Front	-.020	+.001
	Front	Davis	-.013	+.002
	Davis	Drumm	-.007	+.002
	Drumm	Market	-.028	-.008
California	Sansome	Battery	-.014	+.009
	Battery	Front	-.041	+.006
	Front	Davis	-.018	+.001
	Davis	Drumm	-.021	+.004
Pine	Sansome	Battery	-.053	+.013
	Battery	Front	-.069	+.011
	Front	Davis	-.071	+.006
Market	Davis	Drumm	-.019	-.001
	Drumm	Embarcadero	-.051	-.010
Townsend	3rd	4th	+.023	+.001
	4th	5th	-.036	-.004
	5th	6th	-.057	-.010
	6th	7th	-.051	.000
	7th	8th	-.013	+.006

The next to last column of Table IV gives for comparison the Annual Average Changes prior to 1947. These figures were derived from the figures given on the two maps which appeared on pages 148 and 149 of the Annual Report for the year ending June 30, 1947. The averages are taken for the number of years that elapsed between the last reconstruction of each street and the date of the survey in 1947. The interval varies for the different streets, ranging from 9 to 37 years.

TRAFFIC ENGINEERING

ADMINISTRATION

As in previous years, the responsibility for the design and management of the City's traffic control facilities remained divided between the Police Department and the Department of Public Works without clear definition of their respective functions. In general, the Traffic Engineering budget and technical personnel remain with the Department of Public Works where engineering recommendations are made, while the final authority for approval of all installations rests with the Police Department.

There are signs that this cumbersome type of administration which splits traffic engineering responsibilities and functions may be ended in the not too distant future. Three separate proposals have been made by members of the Board of Supervisors covering reorganization of traffic administration in San Francisco. The proposals are briefly as follows:

1. Establishment of a Traffic Commission which would have final authority on most traffic matters and which would establish directives for both the Police Department and the Department of Public Works to carry out.

2. A proposal for a study of and a report on recommended changes in the traffic administration picture in San Francisco to be undertaken by the Automotive Safety Foundation.

3. Creation of a traffic authority in San Francisco which would cover not only traffic but also transit and parking.

While no action has been taken as yet on any of these proposals, they do indicate a realization that traffic administration in San Francisco can and should be improved.

ONE WAY STREETS

Approximately 4.9 miles of one-way streets were added in the 1954-55 fiscal year. The two principal pairs of streets in this category were Rousseau - Lyell Streets and Post - O'Farrell Streets. The Post and O'Farrell one-way street regulations, which were authorized for a trial period of 120 days commencing on March 13, 1955, evoked by far the most heated controversy that one-way streets in San Francisco have experienced so far. While the experiment had the support of important downtown groups organized into the Parking and Transit Council, it was opposed by powerful influences spear-headed by a section of the downtown hotel group.

The Division of Traffic Engineering spent approximately 60 man-days assembling and presenting data and exhibits for the Board of Supervisors in support of the experimental proposal on Post and O'Farrell Streets. "Before" and "After" Studies indicated that the traffic movement had improved very considerably on Post Street and O'Farrell Street with mid-day traffic speeds on Post Street increasing from 6.0 miles per hour to 12.1 miles per hour, an improvement of 102% and traffic speeds on O'Farrell Street increasing from 6 miles per hour to 10.5 miles per hour, an increase of 75%.

The final decision on continuation of these two one-way streets is awaiting action by the Board of Supervisors in July, 1955.

TRAFFIC SIGNS

San Francisco now has a new type of "Keep Right" traffic sign for placement in advance of the street-car loading islands on Market Street. The previous signs, standard R7R's, were being demolished by automobiles at the rate of 5 to 10 signs per month. The mortality rate was so high that the California State Automobile Association refused to continue reinstalling the signs and they were of necessity maintained thereafter by City forces.

Field studies indicated that the probable trouble lay with the fact that the reflecting area of the R7R's was relatively small and it had to compete at night time with high intensity illumination from street lights, theater marquees and neon signs on lower Market Street, and so tended to have a low level of visibility.

The new type signs made of wide angle flat top Scotchlite material, mounted on aluminum plate are not only larger but the reflecting area is increased many times over that of the original "Keep Right" sign. The flat surface of the reflective sheeting prevents the accumulation of an excessive amount of dirt on the face of the sign. Experience with these new signs has been very good, only two of them on the entire length of Market Street having been damaged in the period of 11 months since they were erected.

STOP AND YIELD SIGN SURVEY

There is general agreement both among traffic engineers and the general public that San Francisco is overly controlled with stop signs. At the request of the Board of Supervisors, the Bureau of Engineering undertook a survey to determine where stop signs could be removed or replaced by other forms of control.

The initial unit of the survey covered the section of the City bounded roughly by Van Ness Avenue, Duboce Avenue, Parker Avenue and the Bay. Accident records were checked, field surveys made, and primary and secondary through-street systems planned. Based on this data, an analysis made by the Division of Traffic Engineering indicated that 313 stop signs should be removed in the area, of which 106 could be replaced with "Yield Right of Way" signs and 126 replaced with traffic signals. This initial report, with minor exceptions, has the support of the Police Department and the Municipal Railway. It is believed that when a standard "Yield Right of Way" sign is adopted some time in late 1955, the recommendations as to stop and yield signs will be implemented.

I.B.M. ACCIDENT RECORDS

When handling or correlating large masses of data, it is imperative that the information be put on punch cards if the use of excessive man-power in analysis is to be avoided. For the first time in San Francisco accident records are now being tabulated by location on I.B.M. Cards. Previously, the sheer volume of accidents, which total about 17,000 per year in the City, defied comprehensive analysis except at a few specific locations. With business machine tabulation of the accidents, the Traffic Engineering Division now receives a monthly summary of all accidents in the City by location, which helps to spot any hazardous accident patterns in their incipient stages. Also, high night time and pedestrian accident locations can be easily located for the development of priorities for street lighting, signals and channelization. Other valuable information can also be easily obtained with the new system.

Each day the Traffic Engineering Division receives a summary sheet of accidents that occurred the previous day and the following information is taken from the summary sheet and punched on cards:

1. Location of accident
2. Date of accident

3. Fatalities
4. Personal injuries
5. Time of accident
6. Number and types of vehicles, and people involved in the accident
7. A short description of the accident in a code form

TRAFFIC PLANNING

Traffic planning is assuming an ever greater importance in the functioning of the Traffic Engineering Division. Sound traffic principles applied in the planning stages of private and public projects will decrease traffic congestion, accident hazards and the need for expensive remedial measures afterwards.

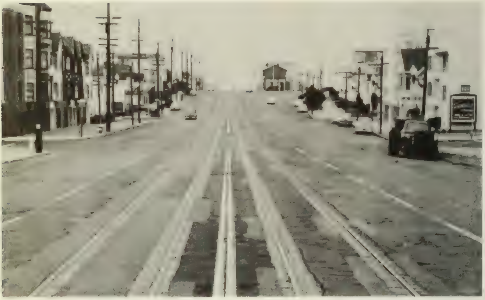
Below is a partial list of projects on which the Traffic Engineering staff has given advice and recommendations in the last year.

University of California Medical Center
Diamond Heights Redevelopment Area
Crown Zellerbach Office Building
Embarcadero Freeway
Southern Crossing and Freeway Connections
Thirteenth Street Widening
Central Freeway ramps at Turk Street and Golden Gate Avenue
Civilian Defense Evacuation Plan
Kezar Stadium Traffic Planning
Civic Center Exhibit Hall
Southern Pacific Train Blockage Study
Market Street and Portola Drive Widening

SIGNALS AND CHANNELIZATION

Five traffic signal contracts totalling $314,128 were awarded in the 1954-55 fiscal year. The two largest contracts, the Fell-Oak Street and the Turk Street-Golden Gate Avenue contracts provided for the installation of fixed time three-dial interconnected traffic signals on these two important pairs of one-way streets. The Fell-Oak Street contract called for signals at 34 intersections and the Turk Street-Golden Gate Avenue contract at 29 intersections.

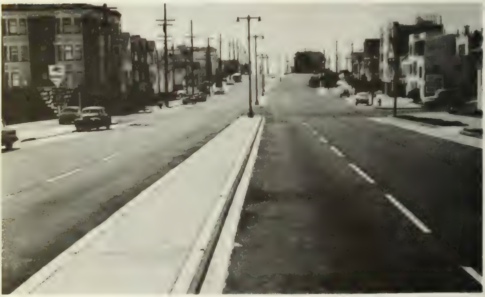
Bryant and Harrison Streets from Fourth to Tenth Streets and Duboce Avenue from Valencia Street to Market Street were also



GEARY BLVD. - 37th AVENUE TO 42nd AVENUE

Before Track Removal,

Construction of Center Island and Channelization



GEARY BLVD. - 37th AVENUE TO 42nd AVENUE

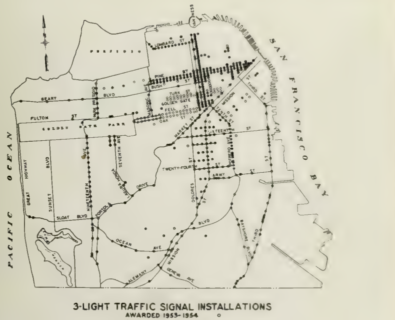
After Car Track Removal,

Construction of Center Island and Channelization signalized in two other contracts. These signals were installed mainly to provide new and flexible types of control for intersections and streets affected by the extension of the Bayshore and Central Freeways.

Isolated Signal Contract No. 13 signalized Larkin Street, an important one-way street, Mission Street from Onodaga Avenue to Richland Avenue, California Street from Presidio Avenue to Tenth Avenue, the Alemany Boulevard and Lyell Street intersection, and the Vermont and 17th Street intersection and provided for modification of existing signals on Broadway.

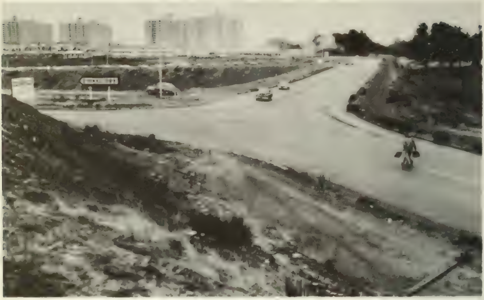
Although most channelization projects were accomplished in connection with signalization contracts, some other noteworthy installations were the center islands and left turn lanes on Lake Merced Boulevard from Font Boulevard to Winston Drive and the center islands and channelization on Geary Boulevard between 33rd and 43rd Avenues.

THREE LIGHT TRAFFIC SIGNAL INSTALLATIONS



Open Circles - Awarded 1954-55
Solid Circles - Completed previously

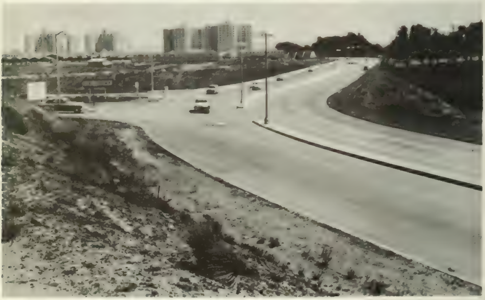
FIG. 5



LAKE MERCED BLVD.

Winston Drive to Font Blvd.

Before Construction of Center Island and Channelization



LAKE MERCED BLVD. - WINSTON DRIVE TO FONT BLVD.

After Construction of Center Island and Channelization

Completed June 9, 1955

TABLE V

TRAFFIC FACILITIES AND IMPROVEMENTS

	COMPLETED 1954-55	APPROXIMATE COST 1954-55	NUMBER IN PLACE 6-30-55
SIGNALIZED INTERSECTIONS			
Wiley Type Signals Replaced	9		
3-Light Installations	46		459
Net Increase	37		
Wiley Type Signals Existing			88
Total Signals			547
Equipped with Pedestrian Signals	12		139
Actuated Signals added	20		137
Cost - All Work		$182,500	
TRAFFIC SIGNS			
Parking Signs Installed	1,524		
Other Signs Installed	2,564		
Other Signs Replaced	65		
Total	4,153		17,000(Est.)
Stop Signs Added	123		
Stop Signs Replaced	14		
Total Cost		15,000	
In Addition, California State Auto Association spent $12,000 for labor			
STREET NAME SIGNS			
Old type street signs replaced with new type	150	3,500	7,378
New Type Street Signs installed	107	5,350	
Street Signs Repaired	1,162	11,150	
Total Cost		20,000	
PARKING METERS			
New Installations	419	21,400	12,578
Maintenance Changes	975	6,000	
Relocations	200	1,600	
Total Cost		29,000	

TABLE V - Continued

TRAFFIC PAVEMENT PAINTING			
Standard Striping, Miles	561.45	57,000	
12-Inch Stripes, Miles	170	96,600	
Pavement Words	1,160	1,670	
Bus Zones	1,820	15,950	
Parking Meters	8,075	6,080	
Total Cost		177,300	
New School Intersections	65		836
CHANNELIZED INTERSECTIONS			
Concrete Islands	11		
Raised Pavement Bar Islands	2		
Total	13		
DIVIDED ROADWAYS			
Concrete Center Island, Miles	0.8		
Painted Center Island, Miles	1.16		

SEWERAGE SYSTEM

FUNDS

At the beginning of the fiscal year available funds for extensions and improvements of the sewerage system totaled $15,589,466.85. The major portion of this amount was the $12,645,000 Bond Issue approved on June 7, 1954, the remainder being made up of the balances of the 1944 and 1948 Bond Issues. These funds are expected to be sufficient to complete the sewage collection system, provide for essential replacements and extensions of the storm and sanitary systems, and to take care of a number of improvements which have been found necessary at the three sewage treatment plants.

PLANNING

Every effort was made to expedite the necessary designs for the remaining units of the collecting system, which were estimated to cost $6,420,000. The sewer gauging program required for design of the North Point Collecting Sewers was completed and final plans started. At the same time, negotiations were undertaken for the acquisition of right-of-way for the needed pumping stations and certain sewers on Southern Pacific property and agreements were reached with the State Board of Harbor Commissioners regarding contemplated work in The Embarcadero.

CONSTRUCTION PROGRESS

The Southeast Collecting Sewer System was expanded by the completion of a sewage pumping station near Hunter's Point and the awarding of contracts for a major sewer in Ingalls Street, a Pumping Station at the foot of Fitzgerald Avenue, and a Sewer Tunnel three-quarters of a mile long under Candlestick Hill. Several essential storm and sanitary sewers were constructed and extended in locations where flooding had occurred or where new land developments required new sewer outlets.

Contracts were awarded for ten sewer jobs aggregating $1,096,698. This, however, does not measure the total amount of work done by the Design Division in connection with the sewerage program. Other work performed consisted of designing sewers installed in connection with various street projects, the review of sewer systems proposed for subdivision and housing projects, and planning improvements of the sewage treatment plants. The latter group of projects is mentioned later under the heading "Sewage Treatment Plants".

STORM AND SANITARY SEWER CONSTRUCTION

The storm and sanitary sewers covered by contracts awarded during the fiscal year are those which were found most essential to meet pressing needs for the relief of flooding and the provision of outlets for new land developments. They are briefly described in the following paragraphs.

Mendell Street Outlet and Sanitary Sewer

The storm outlet sewer and the sanitary diversion sewer constructed in 1954 as far northerly as Davidson Avenue were extended three additional blocks northerly across a filled in area, terminating in a diversion structure at Arthur Avenue, From that point a temporary 30-inch corrugated metal outlet pipe was extended across the tide flats for a distance of about 350 feet to open water. From the diversion structure at Arthur Avenue the sanitary sewer, running back to Davidson Avenue, was installed in the same trench as the storm sewer. Both sewers were constructed on piles consisting of steel shells filled with concrete. The total length of the permanent construction was 870 feet. The project was essential to permit continued filling of the tide land area and to provide an outlet for future sanitary sewage.

Guttenberg Sewer Extension

The sewer in Guttenberg Street was extended south from Hanover Street in Watt Avenue and Bellevue Avenue to permit development of residential lands near the County Line. At the same time, the existing sewer was relocated for about 200 feet north of Hanover Street in order to permit the abandonment of an excessively deep sewer, and the easement in which it ran. A small earth dam was constructed to divert the flow of a small ravine into the new sewer. The work included 750 feet of 30-inch diameter V.C.P. sewer on reinforced concrete foundation and 120 feet of standard V.C.P. sewer.

Ingleside Sewer Section "C"

This was the final unit of the Ingleside Sewer System constructed some years ago. Construction of this unit was deferred so that its necessity could be demonstrated by experience over a few winters. In the meantime, new school facilities with large paved areas were constructed on Phelan Avenue thereby increasing the runoff, and the number of flooding complaints demonstrated the need of the final unit. The sewer runs near the south curb of Ocean Avenue from Miramar Avenue to Ashton Avenue and thence via Ashton Avenue, Pico Avenue and Urbano Drive to the former termination of the Ingleside Sewer. The work included 2100 feet of reinforced concrete sewer and spun concrete pipe ranging in size from 2'-6" by 3'-9" to 5'-3" in diameter. The existing sewer in the center of Ocean Avenue was undisturbed and will continue in service.

Haight Street Sewer

One block of sewer in Haight Street between Divisadero and Scott Streets was replaced because of reports from the Sewer Repair Bureau as to its condition and the fact that ten breaks had been reported in recent years.

Clarendon Avenue Sewer

Work was started on the first unit of a sewer in Clarendon Avenue running easterly from Laguna Honda Boulevard. The job also included 1000 feet of new sewer extending southerly along Olympia Way, a new street which gives access to Midtown Terrace Subdivisions No. 3 and 4 on the westerly slope of Twin Peaks. The sewer will be of spun reinforced concrete pipe ranging in diameter from 27 inches to 57 inches. A portion of the sewer located through newly completed fill was installed with flexible double rubber gasket joints. A portion of the cost of this sewer, as well as the second unit to be built in Clarendon Avenue, will be met by assessments against adjacent property owners.

Bertita Street Relief Sewer

This was a short 12-inch sewer running from the east end of Bertita Street northerly to Alemany Boulevard. It was found necessary because of frequent flooding of Bertita Street west of Seneca Avenue.

San Marcos Avenue Sewer

This job consisted of the construction of 137 feet of V.C.P. sewer to carry storm water from a catchbasin in San Marcos Avenue to the main sewer running along the back line of the lots on the southerly side of the street. It was built to replace a culvert which was found to lie under a dwelling at 201 San Marcos Avenue. The old culvert was one of the numerous sewers built by the subdividers of the Forest Hill tract and taken over by the City many years ago. For some unknown reason it was not located within the limits of any properly acquired easement.

Sewers Constructed In Street Contracts

Street contracts awarded during the year included sewer work in four separate locations as follows:

Chestnut Street: Laguna to Buchanan
(With Track Removal Contract)
Pierce Street: Broadway to Vallejo
(Street Resurfacing Contract)
13th Street: Mission to South Van Ness
(Street Widening Contract)
Portola Drive: Woodside to Clipper
(Street Reconstruction)

The sewer work in the Portola Drive contract was estimated to cost about $18,280. The contract included 750 feet of sewer varying in size from 18-inch to 30-inch, a portion of it being encased in reinforced concrete. An unusual feature was a manhole 30 feet deep equipped with ladders and intermediate landing platforms.

Fillmore Street Guniting Job

Continuing a repair job started in the preceding year, a contract was awarded for repairing the sewer in Fillmore Street from Germania Street to Duboce Avenue by guniting the interior. The job covered about 465 feet of sewer and called for a ¾-inch thickness of gunite. The cost was about $1.04 per square foot of interior surface.

COLLECTING SEWER CONSTRUCTION

North Point Collecting System -Section A

Plans were completed for Section A of this system which is to serve the area bounded by Sansome Street, Broadway and The Embarcadero. The new sewers will convey sanitary flow by gravity to the North Point Main in Sansome Street whence it goes to the North Point Sewage Treatment Plant. This job was out for bids at the end of the fiscal year.

Alterations To Diversion Structures

To improve operation of the collecting system in the area south of Market Street a contract was let for modification of the sewer diversion structure at Tenth and Harrison Streets by eliminating the old sedimentation chamber and enlarging the dropout opening. The similar structures at Fifth and Howard Streets and Seventh and Howard Streets will have similar dropout opening enlargements. These alterations when completed will prevent the clogging that has occurred because of the small outlets and will reduce the probability of sewage passing over the North Point Main Sewer to reach a pumping station instead of flowing as intended by gravity to the North Point Sewage Treatment Plant.

Hunters Point Pumping Station

In the Southeast System a 1.5 mgd pumping station in the

Hunters Point area was completed and now diverts sewage from the Hudson Avenue and Griffith Street outfalls through a 10-inch cement lined force main some 650 feet to Galvez Avenue and Hunters Point Boulevard, whence the sewage flows by gravity to the Southeast Plant.

Ingalls Street Sewer

The Ingalls Street sewer runs from the proposed outlet of the Candlestick Point Sewer Tunnel at Fitzgerald Avenue to the proposed Yosemite Pumping Station. The total length will be 1640 feet and the inside dimensions will be 2'-6" wide by 3'-9" high, all being constructed of monolithic concrete. Near the northerly end for a distance of 468 feet the sewer was constructed on timber piles. At the south end the invert grade of the sewer is 35 feet below pavement level.

Candlestick Sewer Tunnel

A contract was awarded for this tunnel but work had not yet been started at the end of the fiscal year. The tunnel will run about 3850 feet under the Candlestick Point Hill from the Candlestick Housing Project to Ingalls Street at Fitzgerald Avenue. It will be 6'-6" in diameter or a 4'-6" by 6'-6" egg-shaped section at the option of the Contractor. When completed it will carry the sanitary sewage from the Sunnydale Avenue outfall to the Ingalls Street Sewer for delivery to the Yosemite Avenue Pump Station.

Fitzgerald Sewage Pumping Station

A new sewage pumping station was started near the bay shore at the foot of Fitzgerald Avenue. It will have a capacity of 0.5 mgd and will replace a small temporary station at about the same location. The contract includes a new combined sewer in Griffith Street to replace an existing inadequate 15-inch sewer. The station will divert sewage from an area of about 30 acres, including the Bret Harte School and a proposed housing project, through the existing 8-inch force main to the Ingalls Street Sewer and thence to the Yosemite Station.

COLLECTING SEWER PLANNING

Plans are rapidly being developed for additional units of the two collecting systems and the following work is scheduled for advertising in the fiscal year 1955-56.

North Point Collecting Sewers

Howard Street Diversion and Steuart Intercepting Sewer

A large diversion structure at the intersection of Howard Street and Steuart Street.

Jackson Street Diversion and Related Sewers

This unit will include a diversion structure in Jackson Street at The Embarcadero and intercepting sewers along The Embarcadero to Market Street, and along Market Street, to Steuart Street.

Commercial Street Pumping Station, Force Main and Related Sewers

The pumping station will be at the northeast corner of Commercial and Drumm Streets. It will have a capacity of 9.25 mgd and will replace the existing pumping station on Commercial Street. A 24-inch force main will run in Commercial Street to Sansome Street and intercepting sewers will be constructed easterly to The Embarcadero.

Yosemite Sewage Pumping Station

This plant will have a capacity of 12.3 mgd and will be located at the northeast corner of Yosemite Avenue and Ingalls Street. The force main will run along Ingalls Street to Thomas Avenue.

Sunnydale Diversion and Candlestick Drive Sewer

The diversion structure and sewer will connect the existing Sunnydale outfall with the entrance portal of the Candlestick Point Sewer Tunnel.

STATUS OF COLLECTING SEWER SYSTEMS

June 30, 1955

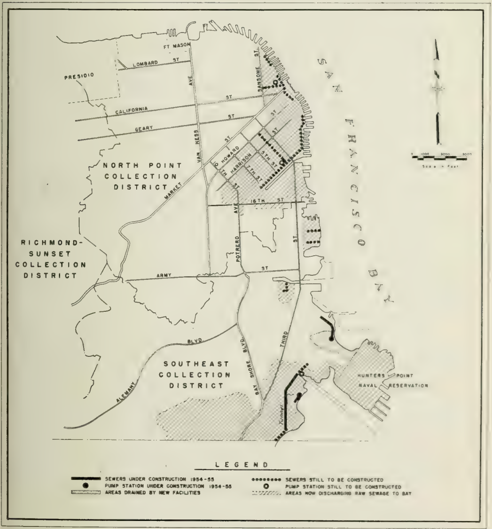

FT MASON
LOMBARD ST
PRESIDIO
CALIFORNIA
ST
GEARY
ST
SANSOME ST
VAN NESS AVE
HOWARD ST
HARRISON
5TH ST
7TH ST
9TH
ST
MARKET
16TH ST
POTRERO AVE
ST
ARMY ST
THIRD
BLVD
BAY SHORE BLVD
ALEMANY
Yosemite
SAN FRANCISCO BAY
NORTH POINT COLLECTION DISTRICT
RICHMOND-SUNSET COLLECTION DISTRICT
SOUTHEAST COLLECTION DISTRICT
HUNTERS POINT NAVAL RESERVATION
Scale in Feet
LEGEND
SEWERS UNDER CONSTRUCTION 1954-55
PUMP STATION UNDER CONSTRUCTION 1954-55
AREAS DRAINED BY NEW FACILITIES
SEWERS STILL TO BE CONSTRUCTED
PUMP STATION STILL TO BE CONSTRUCTED
AREAS NOW DISCHARGING RAW SEWAGE TO BAY

FIG. 6

SEWAGE TREATMENT PLANTS

OPERATION

The three sewage treatment plants were operated under the general supervision of the Bureau of Engineering until December 1, 1954. On that date responsibility for supervision was transferred from the Bureau of Engineering to the Bureau of Sewer Repair, which thereafter became the Bureau of Sewer Repair and Sewage Treatment. In order to avoid the confusion caused by a transfer of timekeeping and supply requisitioning procedures in the middle of a fiscal year, the Bureau of Engineering continued to perform these functions for the treatment plants until June 30, 1955.

TABLE VI
TREATMENT PLANT IMPROVEMENT CONTRACTS AWARDED DURING THE FISCAL YEAR 1954-55

DESCRIPTION	CONTRACT AMOUNT	FUND
Southeast - Reconstruction of mechanical bar screen dead plates	$4,095.00	General
Richmond-Sunset - Manholes, curbs and cover plates	2,250.00	1948 Sewage Treatment Bonds
Southeast - Two new boilers and appurtenances	114,361.06	1948 Sewage Treatment Bonds
Southeast - New arches and burner rings, furnaces 1 and 2	5,897.00	General
Southeast - New mud and Eductor pumps, etc.	35,292.00	1948 Sewage treatment bonds
Richmond-Sunset - Painted digester dome	1,052.00	General
Richmond-Sunset - Installation of boilers	25,900.00	1948 Sewage Treatment Bonds

TREATMENT PLANT IMPROVEMENTS

The Bureau of Engineering proceeded with the design and estimating of a number of needed improvements at the three sewage treatment plants in accordance with a general program previously worked out with the Senior Engineer in charge of plant operation. The preceeding table shown the contracts of this nature which were awarded during the fiscal year and their status on June 30, 1955. Further details will be found in Table E of Appendix I.

LABORATORY AND TESTING

The testing laboratory was operated as a unit of the Construction Division to check the quality of materials used in construction projects and to control and test asphalt and concrete mixes used in pavements and structures. In addition many routine tests and checks were made for the Purchaser of Supplies, the Bureau of Architecture, the Public Utilities Commission, the Fire Department and the Recreation and Park Department. These included many visual analyses and suggestions.

CONCRETE

Concrete samples continue to test above specifications. In some cases the results of tests of samples of pavement concrete do not represent the full strength of the mix due to the necessity of transporting cylinders from job to laboratory immediately after sampling. This procedure disturbs the setting of the sample and results in a poor break. This effect frequently cannot be avoided since there is usually no suitable job-site location to leave samples during the setting period.

In some concrete pavement slabs shrinkage checks have been observed soon after placing concrete on subgrade. It is the opinion of this laboratory that most of this checking is not actually shrinkage but rather settlement of the mass while setting due to lack of proper compaction. This has been remedied by using a slightly higher slump resulting in a more readily compactible concrete. No checking has been noted since this procedure was started.

The use of Calcium Chloride to accelerate the setting of concrete was continued in all pavements and parking strips to speed up the use of the roadway for movement of traffic. On steep grades, where stiff mixes are required, the use of Calcium Chloride has been found to be undesirable. It sets the surface too fast and the concrete cannot be properly placed and finished. This trouble was experienced on 23d Street east of Carolina Street.

ASPHALT

Since adopting an asphalt mix using top sand and crushed rock or broken stone with manufactured sand, in lieu of straight Antioch sand and gravel, and using a lower asphalt content, the quality and texture of pavement surfaces have been improved.

A test patch at upper Market Street, at the intersection of 18th Street, was placed by the Bureau of Street Repair while operating from the old municipal asphalt plant using 50 - 60 penetration in lieu of 85 - 100. This intersection had been paved several times, using 85 - 100 penetration asphalt, which raveled and disintegrated within a short time. The final patch, using 50 - 60 penetration asphalt, has been in use for several months and shows no signs of wear.

It is the opinion of this laboratory that the 85 - 100 penetration asphalt used in the previous patches was the cause of the failure. This type asphalt, being softer, sets too slowly to withstand the wear of traffic when the surface has to be opened for use before it is thoroughly cool and set.

Recently the new asphalt plant of the Department of Public Works was opened for operation. This laboratory assisted in preparing and designing mixes, screening aggregate samples and conducting tests to determine the efficiency of driers and capacities of screens. The number six sieve was found to be rejecting too much material over to the next size sieve and is to be replaced with a number six slotted sieve for maximum efficiency. Due to better control and separate storage of aggregates the plant is producing very satisfactory workable mixes.

SUMMARY OF TESTS PERFORMED

A summary of the number of tests performed in the laboratory during the year for various agencies, together with corresponding figures for the preceding year, are shown in the following table.

TABLE VII

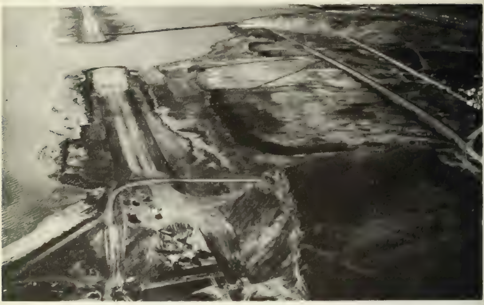
	1953-54		1954-55	
Chemical and Physical Tests				
Public Utilities Commission	25		5	
Department of Public Works	100		75	
Purchaser of Supplies	90		150	
S.F. Fire Department	25		30	
Recreation and Park Department	30		25	
Bureau of Architecture	300		225	
Bureau of Engineering	120	690	25	535
Paint Tests				
Recreation and Park Department	6		2	
Purchaser of Supplies	30		40	
Bureau of Architecture	10		28	
Public Utilities Commission	15		7	
Bureau of Engineering	5	66	0	77
Asphalt and Coal Tar Tests				
Corporation Trenches	15		6	
Public Utilities Commission	35		30	
Recreation and Park Department	5		12	
Department of Public Works	150		120	
Bureau of Engineering	200	405	125	293
Concrete Tests				
Recreation and Park Department	42		10	
Bureau of Architecture	525		620	
Public Utilities Commission	38		250	
Bureau of Engineering	265	870	330	1,210
TOTAL		2,031		2,115

GARBAGE DISPOSAL

Since 1932, all garbage and refuse collected in San Francisco, except limited amounts of hotel and restaurant wastes sold to hog raisers, have been disposed of by the sanitary fill method. Two licensed scavenger companies make the collections and haul to the dump and a jointly financed company operates the sanitary fill. The City's only functions are to control collection rates and enforce public health regulations.

COLLECTION AND TRANSPORTATION

Collection of garbage and transportation to the disposal site were handled during the past year in much the same manner as described in previous reports.



FREEWAY EXTENSION - CANDLESTICK POINT TO SIERRA POINT

Candlestick Point Fill and Borrow Pit

SANITARY FILL

The disposal site is located on a tide flat on the shore of San Francisco Bay just south of the City's southerly boundary. The property is owned by the Southern Pacific Company and adjoins the company's Bayshore switching yards for a distance of about 6400 feet.

Accompaning photo illustrates the general shape and condition of the sanitary fill on February 10, 1955. The view is looking south from a point near the County Line and shows the sanitary fill area in the right background crossed by two parallel service roads. The fill extends into the far right background where railroad tracks and a few box cars can be seen.

The left side of the photograph shows the highway fill being constructed by the State Division of Highways to carry the Bayshore Freeway across open water to Sierra Point in the far left background. The fill is being made with dry material hauled from quarries in the immediate foreground of the picture and also from hill areas to the west by means of a causeway which runs from the sanitary fill to the State fill. Since the picture was taken, the gap in the State fill has been closed and a temporary culvert has been installed to provide for drainage of the enclosed body of water. The mud wave forced up by settlement of the fill is clearly visible in the photograph.

During the past year a large part of the garbage has been deposited in the area between the two fills. The total surface area of the sanitary fill is now about 195 acres. Some 36 acres of a portion of the fill placed during the years 1932 to 1936 are now occupied by light industrial facilities.

FILL AND COVER OPERATIONS

The Sanitary Fill Company which handles the fill and cover work operated in much the same manner as described in previous reports. Somewhat thicker layers of garbage were used, sometimes running from 14 feet to 20 feet in depth, particularly when making the initial fill along the shoreline. The newly deposited garbage is covered immediately with a blanket of earth and rock 12 inches to 18 inches thick and after a few weeks of settlement a second blanket is spread to level the area and cover any cracks that may have appeared.

SETTLEMENT OF THE FILL

The height of the fill ranges from 18 feet to 28 above mean sea level. The first layers deposited on the tide flats sometimes settle as much as 5 feet in three days due, in part, to displacement of the underlying mud and, in part, to compression of the garbage. As additional layers are placed the settlement is much slower, averaging about 1-foot per week for the first two weeks, then declining to about 6 inches per week, and finally reaching relative stability after a total settlement of about 8 feet has been reached.

A survey was made in February 1955 to obtain the elevations of several bench-marks previously set in the surface of the oldest third of the sanitary fill. The change in annual rate of settlement of two typical points located near the railroad track and about 2000 feet and 3100 feet respectively from the northerly margin of the fill is shown below.

	AVERAGE ANNUAL SETTLEMENT IN FEET	
PERIOD	NORTHERLY BM	SOUTHERLY BM
March 1944 - December 1946	0.51	-
December 1946 - January 1948	0.28	1.02
January 1948 - April 1952	0.24	0.61
April 1952 - February 1955	0.14	0.32

COVER MATERIAL

During the Fall of 1954, cover material was taken for the first time from a new quarry on the northerly slope of Candlestick Cove where government war housing units had been removed. Operations in this quarry were suspended during the ensuing winter because of the high clay content of the surface material but were resumed in May 1955.

TABLE VIII
GARBAGE COLLECTION AND DISPOSAL STATISTICS
Calendar Years 1953 and 1954

	1953	1954
Garbage Collection		
Truck used, average	146	145
Trips per day	272	273
Paper Collection		
Flat-bed trucks used	26	27
Amount collected, tons	24,024	24,492
Amount salvaged, tons	16,589	16,320
Amount dumped, tons	7,435	8,172
Income of Sanitary Fill Co.	$246,459	$254,904
Fill and Cover Expense		
Operations	$202,567	$204,385
Roads and Maintenance	7,515	9,338
Administration and Inspection	51,120	47,220
Total Expense	261,202	260,943
Garbage and Refuse Handled		
City of San Francisco, tons	272,250	264,975
Other sources, tons	1,593	2,934
Total tons	273,843	267,909
Quantity per day, tons (312 days)	878	859
Cost of disposal per ton	$ 0.930	$ 0.974
Cover Material		
Quantity used, cu. yards	188,775	217,760
Cost, total	$109,895	$115,265
Cost per cu. yd.	$ 0.582	$ 0.531
Quantity per cu. yd. of garbage and refuse	0.690	0.812
Truckloads of Garbage and Refuse	84,760	85,052
Average Weight per Load, tons	3.23	3.15
Estimated Average Weight of garbage per cu. yd. in lbs.	359	351

STATISTICS

The information contained in Table VIII was obtained from Easley & Brassy, the contracting firm which handles the fill and cover operation for the Sanitary Fill Company. The costs shown cover the contractor's expense but do not include administrative and overhead expenses of the Sanitary Fill Company. The income received from the scavenger companies was increased from 90¢ to $1.05 per ton on September 1, 1954 by agreement between the parties, following an increase in collection rates approved by the voters on June 8, 1954.

ADMINISTRATION OF THE BUREAU

ORGANIZATION

The plan of organization of the Bureau as of June 30, 1955, is shown on the chart at the beginning of the report of this Bureau. It will be noted that there are two staff divisions and five line divisions under the direction of the City Engineer who heads the Bureau and reports to the Director of the Department. The Assistant City Engineer assists in general supervision and also acts as Head of the Division of Streets and Highways.

The persons who were in charge of each division, section and unit as of June 30, 1955, are shown in the following tabulation.

SUPERVISORY PERSONNEL
As of June 30, 1955

Division, Section and Unit	Person in Charge
Division of Streets and Highways	C.J. Geertz, Asst. City Engr.
Street Improvement Section	M.H. Levy, Engineer
Improvement Plans Unit	C.C. Clifton, Asst. Engr.
Assessment Unit	L.C. Whaley, Asst. Engr.
Permit and Inspection Unit	C.S. Hiden, Asst. Engr.
Plan and Record Unit	C.C. Clifton, Asst. Engr.
Highway Section	N.F. Newman, Engineer
Track Removal Section	E.J. Sierra, Engineer

SUPERVISORY PERSONNEL Continued

Division, Section and Unit	Person in Charge
Division of Design	R.H. Owens, Senior Engineer
Administrative Section	G. Galli, Engineer
Structural Section	N.F. Yde, Engineer
Sewer Section	R.F. Lauenstein, Engineer
Sanitary and Special Projects	R.C. Levy, Engineer
Mechanical Section	R. Dale Keeley, Asst. Engr.
Electrical Section	Ivan Sandberg, Engineer
Underground Structures Section	W.R. Daly, Sr. Draftsman
Hydraulics Section	George T. Jeong, Engineer
Specifications and Estimates	Stanley C. Gerughty, Engineer
Division of Traffic Engineering	Ross T. Shoaf, Engineer
Administrative Section	William Marconi, Asst. Engr.
Design Section	Charles M. Lang, Asst. Engr.
Operation Section	Mark L. Kermit, Asst. Engr.
Maintenance Section	John E. Kenck, Asst. Engr.
Surveys and Mapping Section	Henry G. Louie, Engineer
Construction Division	John D. Roberts, Senior Engineer
Testing Laboratory Unit	P.F. Bernard, Eng. Chemist
Contract Administration Division	John Fiacsan, Engineer
Office Management Division	Wesley J. McKee, Head Clerk
Police Department Assignment	John L. Slater, Engineer, was assigned to the Police Department to assist the Director of Traffic

PERSONNEL

The staff of the Bureau was reduced by 104 persons, principally because of the transfer of the Sewage Treatment Plant operating personnel as shown by the following summary.

Personnel At Beginning and End of Fiscal Year

Division	July 1 1954	June 30 1955	Change
Design and Administrative	106	109	+3
Construction (Field)	29	27	-2
Surveys and Mapping (Field and Office)	27	24	-3
Traffic Engineering	22	22	0
General Clerical Staff	17	17	0
Sewage Treatment Plants	102	0	-102
TOTALS	303	199	-104

PAYROLL

The following tabulation shows the number of employes and total payrolls charged to General and Project funds, excluding treatment plant operation.

Source of Payroll Funds

	Employes End of Year	Payroll 1954-55
General Fund (Budget Payroll)	60	$361,335
Project Funds - Gas Tax, Bonds, etc. (Interdepartmental Payroll)	139	743,656
TOTALS	199	$1,104,991

RETIREMENTS AND DEATHS

The Bureau lost the services of the following valued employees during the year:

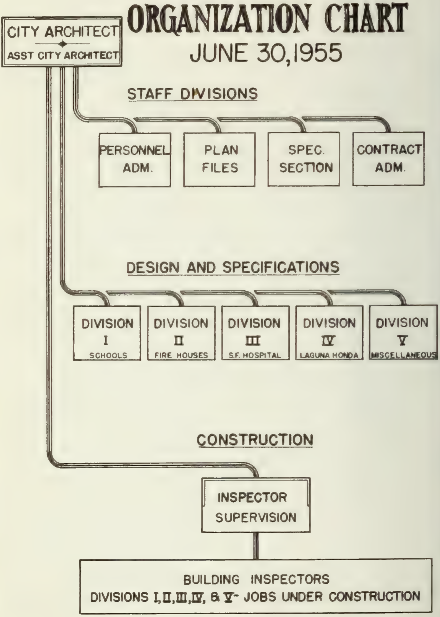
Edward Rohde	Died	8-13-54	Jr.Oper.Engineer	13 years
Wm. A. Smith	Retired	11-1-54	Jr. Engineer	42 years
Chas. J. Muller	Died	11-5-54	Chief of Party	29 years
Harry A. Brook	Retired	3-1-55	Chief of Party	22 years
Edw. C. Johnson	Retired	3-1-55	Head Clerk	40 years
Edw. C. Cullen	Died	4-24-55	Engineer	29 years
Thos. E. Moroney	Retired	6-1-55	Chief of Party	30 years

BUREAU OF ARCHITECTURE

DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART

JUNE 30,1955



BUREAU OF ARCHITECTURE
Charles W. Griffith - City Architect

FUNCTIONS

The Bureau of Architecture is concerned with all new and existing City buildings which are under the jurisdiction of the Department of Public Works. The Bureau is charged with the responsibility for the design and construction of new City buildings and the modernization, remodeling, and maintenance projects of existing City buildings, which exceed $2,000 in cost. The activities of the Bureau are divided into two separate but related functions: the preparation of estimates, drawings, and specifications, and the supervision of construction.

Independent architectural firms are ordinarily commissioned to design and prepare the working drawings and specifications for new Civic buildings, under the direction of the Bureau. The Bureau assists the client agency in the preparation of the building program, arranges and participates in the many conferences necessary between the architects and the agency, reviews the drawings and specifications, checks all cost estimates closely, and certifies the proper completion of the architectural work through the various stages. The Bureau also coordinates and programs the work of the architects to insure the completion of the drawings and specifications to comply with required construction schedules. When the drawings and specifications are properly completed, the Bureau prepares all necessary forms and data so that bids may be requested and received by the Director of Public Works.

Modernization, remodeling, repair projects exceeding $2,000. in cost, and some new buildings are handled directly by architects and draftsmen of the Bureau; and, in general, the same procedures are followed. This phase of the Bureau's work has been increasing while the tremendous new building program, which was principally the result of the 1948 School Bond Issue, is decreasing.

ORGANIZATION

The Organization Chart indicates in a very brief manner the breakdown of divisions which has been found efficient in handling the Bureau's work. The City Architect and Assistant City Architect are indicated in one block at the head of the Bureau. There is a further breakdown of responsibilities between the two as follows:

1. The Assistant City Architect supervises the Fire Department and Laguna Honda programs, all supervisory work related to private architects, and special architectural and engineering surveys. He also handles special programs such as the "Survey Report on Future Occupancy of City Buildings," the Civic Center Exhibit Hall, and other work which is of especial importance.

2. The City Architect handles the supervisory work in connection with the other programs and assignment of personnel.

3. Both the City Architect and the Assistant City Architect maintain sufficient familiarity with the other's work so that no delay in the various programs result when either is away from the office on vacation or for other reasons.

The organization of the Bureau of Architecture is further broken into three separate and distinct functions: Staff Work, Design and Specification Work, and Inspection. These functions are as follows:

Staff Divisions

Division I - Contract Administration
This division is responsible for the coordination of jobs under construction. All correspondence, shop drawings, reports, etc., concerning jobs under construction and completed work clear through this division.

Division II - Specifications
This division is responsible for specification standards, the coordination and accuracy of the general conditions affecting the contract, and the mechanics of editing, checking, and mimeographing the specifications.

Division III - Personnel
This division is responsible for fiscal arrangements and work orders for both architectural and related engineering services.

Division IV - Plan Files
This division is responsible for requisition and procurement of blueprints, assembly of blueprints, specifications, and bid forms, the storage of tracings, blueprints and specifications, and related work.

Design Divisions

The responsibility for processing the various jobs from the initial inception through to the completion of the final drawings and specifications has been broken down into five separate divisions. Each of these divisions is headed by an architect who not only maintains formal and informal relationships with the client agency, but also supervises the draftsmen assigned to him for the preparation of drawings and specifications. The five divisions are:

Division I - School Work
Division II - Fire Department Work
Division III - San Francisco Hospital Work
Division IV - Laguna Honda Work
Division V - Miscellaneous Work
Miscellaneous Work includes all work which does not fall under the general categories listed as Divisions I, II, III and IV.
Division VI - This division has been established temporarily to handle the required emergency work at the Palace of the Legion of Honor.

The number of jobs under preparation and in preliminary design stage which is being processed in the Design Divisions is 93 in the total amount of $22,706,120.

Inspection Division

The Bureau supervises and inspects all building construction, whether it has been designed by private architects or by Bureau personnel. The responsibilities of the Inspection Division include progress and validity of the construction work, contract payments, and certification of completion of contract. The number of jobs under construction is 49, and the amount of work is $7,620,839.

The Inspection Division is headed by the Senior Supervising Construction Inspector who also supervises the Junior Supervising Construction Inspector and another Building Inspector who is assigned supervisory duties for the present. The twenty-two building inspectors are broken down into two groups of seven and one of eight, which are supervised by the three mentioned above.

A secondary responsibility of the Inspection Division is concerned with the jobs completed throughout the previous fiscal year. The amount of work which will be done on these completed jobs is indeterminate but, in certain cases, will be considerable. A thorough inspection must be made of each job at the end of the year bonded guarantee period, one year after acceptance of the job; and, any defect found, which is the result of faulty materials or workmanship, must be corrected by the Contractor. A situation often develops in which much correspondence and many conferences are involved when such defective work is discovered, and considerable time is always taken in the proper disposition of such cases.

The total number of jobs completed during the past fiscal year was 103, and the total dollar amount was $9,860,550.88.

BOND ISSUES

The greatest amount of the Bureau's work load at present is processing work for which bonds have been voted. The bond issue work is as follows:

I - 1948 School Bond Issue

This bond issue was voted in November of 1948 and construction started on the first school project early in 1950. This huge building program continued without interruption through the three years of the Korean War, which created many serious material and labor shortages, and is now almost completed. The status of this work is as follows:

Major School Bond Projects

	No.	Cost	Percentage
Construction completed	30	$27,571,089.46	74
Construction under contract	6	5,777,355.00	15
Plans Completed	2	3,683,000.00	11
TOTALS	38	$37,031,444.46	100

II - 1952 Fire Department Bond Issue

This bond issue work progressed extensively during the past fiscal year. The reconstruction work was completed on five separate fire houses, reconstruction work was being completed on two other fire houses, and four new fire houses were under construction.

The program is divided into two general parts: (1) the reconstruction of existing fire houses, wherever such reconstruction is practicable and economical and (2) the construction of new fire houses to replace those houses which must be abandoned because it is not economical nor feasible to complete a reconstruction program which would make them structurally safe.

The design work required for the reconstruction of existing fire houses, which was assigned generally to Bureau personnel, is now almost completed. It is expected that the last reconstruction contract will be awarded in the fall of 1955.

The construction of new fire houses has been delayed considerably, however, by factors over which this Bureau has no control. The acquisition of sites for the new fire houses has caused the greatest delay, as it usually requires a period of a year or more to secure the site after a definite location has been determined. No design work on a new fire house can be done prior to the final acquisition of a site. It is therefore obvious that a period of approximately two years is required between selection of site and actual construction of a new fire house. However, construction of four new fire houses did start during the past fiscal year; and construction of two additional fire houses will start in the fall of 1955.

The status of this Bond Program is as follows:

Reconstruction Projects

	No.	Amount
Reconstruction completed	5	$ 110,393.89
Reconstruction in progress	2	148,534.00
Bids received pending award of contract	1	97,075.00
Plans and specifications completed	2	182,200.00
Plans and specifications under preparation	8	409,456.00
Held in abeyance	1	55,848.00
TOTALS	19	$1,003,506.89

New Fire Houses

	No.	Amount
Construction in progress	4	$ 829,078.00
Plans and specifications being completed	2	519,000.00
Delayed pending selection and acquisition of sites	4	600,000.00
TOTALS	10	$1,948,078.00

In addition to the above, one new fire house, Engine 10, which was partially financed through bond funds, was completed during the fiscal year 1953-54. One other new fire house, Engine 29, which did not involve bond funds but which was coordinated with the bond program was completed April 22, 1954.

III - 1954 Laguna Honda Bond Issue

The preparation of drawings and specifications for this work began early in 1955, as soon as the bond funds were made available. It is now well along, and it is expected that contracts in excess of $3,000,000. will be awarded during the fiscal year 1955-56. The construction of one project, Alterations to Kitchen, Bakery, and Commissary, which involved approximately $80,000.00 of bond funds, is under construction and completion is scheduled for March 11, 1955.

The schedule for this bond issue work for the fiscal year 1955-1956 is as follows:

Job	Estimate	To Be Advertised
Project I - Modernization of Clarendon Hall	$1,127,000	Feb. 29, 1956
Project V - M & O and Related Work	450,000	Dec. 14, 1955
Alterations to Ward Serving Kitchens, Bldgs. E, K, L, M	17,500	Bids to be rec'd. July 6, 1955
Project II - Power House and Related Work	300,000	Nov. 23, 1955
Project III - Elevators, Connecting Corridors, and Related Work	350,000	Sept. 21, 1955
Project IV - Commissary Roads, Parking, and Related Work	500,000	March 21, 1956
Project X - Steam Mains and Returns	221,000	March 21, 1956
Project VII - Laundry Modernization	202,000	March 14, 1956
TOTAL	$3,167,500	

Related Work

These two Public Health bond issues are unique in that the funds for all deferred maintenance work were deleted with the intent that such funds would be provided in the budget each year and that this work would be coordinated with the bond work. The deferred maintenance work to be completed during fiscal year 1955-56, which will be coordinated with the bond work, is as follows:

Job	Estimate	To Be Advertised
Replace Plumbing, Ward Building "A"	$ 156,700	This work will be coordinated and advertised with bond projects
Alterations to Electrical Work, Main Building	50,000	
Replace Circuit Breakers, Main Building	4,000	
Weatherproofing, Main Building and Building "A"	20,000	
Exterior Repairs, Building "A"	20,000	
Replace Steam Valves, Building "A"	3,250	
Essential Window Repairs	60,000	
Replace Vacuum Breakers	4,500	
Replace One Water Tank	46,200	
TOTAL	$ 364,650	

IV - 1954 San Francisco Hospital Bond Issue

The preparation of drawings and specifications for this work was also progressing rapidly. It is expected that contracts in the approximate amount of $1,310,000. will be awarded during fiscal year 1955-56.

The schedule for this bond issue work is as follows:

Job	Estimate	To Be Advertised
Project I - Modernization of Maternity Building	$ 546,000	April, 1956
Projects III, IV, V, and VI - Exit Stairs, Ward Buildings 40, 30, 20 and 10	160,000	Nov. 23, 1955
Project II - A - Admission Emergency and Social Service	160,000	Oct. 19, 1955
Project II - B - New Electric Generating Facilities	60,000	Nov. 2, 1955
Project II - C - Modernization of Service Bldg., Connecting Passageway, New Elevator, Locker and Dressing Room	200,000	Oct. 5, 1955
Project II - D - Miscellaneous Modernization of Diet Laboratory, Garbage Area, Fire Survey, and Other Requirements	184,000	Dec. 7, 1955
TOTAL	$1,310,000	

Related Work

The related deferred maintenance work, which was included in the 1955-56 budget, was scheduled as follows:

Job	Estimate	To Be Advertised
Replace Water and Steam Mains, Maternity Building	$ 200,000	(Included with Proj. 2, Bond Wk. April, 1956)
Replace Defective Plumbing, Service Building	43,000	October 19, 1955
Replace Defective Steam Mains, Service Building	48,000	October 19, 1955
Roof, Gutters, and Other Exterior Repairs	18,000	October 19, 1955
Exterior Painting	20,000	October 19, 1955
Flooring in Service Building	8,000	October 19, 1955
Alterations to Bakery	60,000	December 7, 1955
Alterations to Vegetable Preparation Room	7,500	December 7, 1955
Replace Boiler Breeching	6,000	December 7, 1955
TOTAL	$ 410,500	

V - 1954 Bond Issue for Civic Center Exhibit Hall

The design work for this exhibit hall, which is to be constructed under the southern half of the Civic Center Plaza, proceeded satisfactorily. The architects had completed Phase I of their contract, which included a program, schematic drawings, and estimate at the end of the fiscal year, and this work was being considered by the many interested civic boards and commissions.

The schedule for the completion of the $2,750,000 structure was established as December, 1957. This schedule can and will be maintained if the project is not delayed by factors over which this Bureau has no control.

VI - Proposed Bond Issue - School Department

This Bureau will assist the School Department in preparing data for a bond issue for new secondary schools during the coming fiscal year. This bond issue will probably be presented to the voters in the summer or fall of 1956.

PERSONNEL

The permanent staff of the Bureau increased by nine during the past fiscal year, due principally to the fact that additional personnel were required to process the increased work load incident with the approval of the Public Health Bond Issues. There was a decrease of twelve, however, in the temporary employees. This decrease was due principally to the increased efficiency of our inspection staff.

Attention is invited to the fact that only eight temporary inspectors were employed this year to handle the increased summer work of the Bureau, whereas fifteen were required during the summer of 1954 and twenty-nine were required during the summer of 1952. This reduction was made possible by arranging for each of the temporary inspectors to handle three or more of the vacation jobs in place of just one. This arrangement makes it necessary to provide transportation for the temporary inspectors, which creates an increased work load on the office personnel, but has effected major economies in our Inspection Division.

	30 JUNE 1954		30 JUNE 1955		CHANGE	
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
City Architect	1	0	1	0	0	0
Asst. City Architect	1	0	1	0	0	0
Architects	6	0	8	1	+2	+1
Sr. Arch. Draftsmen	8	2	9	1	+1	-1
Arch. Draftsmen	1	4	5	0	+4	-4
Jr. Draftsmen	0	0	1	0	+1	0
Office Assistant	1	1	2	1	+1	0
Senior Clerk	1	0	1	0	0	0
General Clerk Stenographer	4	0	4	0	0	0
General Clerk Typist	2	1	3	1	+1	0
Supervising Construction Inspector	1	1	2	0	+1	-1
Building Inspector	16	15	14	8	-2	-7
	42	24	51	12	+9	-12

The Bureau's personnel is divided into four groups according to location. The duties performed by these groups are briefly described as follows:

Personnel	Group	Location	Activities:
9	1	Room 265, City Hall	Administrative, Conferences, Assembly of Plans and Specifications for Bidding, General Files, Drafting for Budget
10	2	Room 252, City Hall	Inspection Estimates, Preliminary Design Program and Budget Section, Analysis of Construction
22	3	45 Hyde Street	General Drafting Room, Specifications, Drawings, Research, Checking, and Report Section
22	4	In the Field	Field Inspection

WORK DONE

The work completed by the Bureau during the fiscal year of 1954-55 was fairly evenly divided between the office and the field. The number of jobs and dollar value of the work processed was as follows:

	Jobs	Amount
Construction Completed	103	$ 9,860,550.88
Contracts Under Construction	49	7,620,839.00
Work under Preparation	77	15,858,416.00
Preliminary Design Stage	16	6,847,604.00
TOTAL (All Work)	245	$40,187,409.88

SUMMARY OF WORK

ALL WORK COMPLETED, UNDER CONSTRUCTION, UNDER PREPARATION AND IN PRELIMINARY DESIGN STAGE JULY 1, 1954 TO JUNE 30, 1955

Note: Details of each Project are in Appendix II

CONSTRUCTION COMPLETED

Board of Education		
New School Buildings	$7,066,549.46	
Miscellaneous Alterations	1,063,777.27	
		$8,130,326.73
Fire Department		
Test Borings and Soil Analysis	4,295.00	
New Construction	694,919.38	
Reconstruction	105,113.96	
		804.328.34
Public Health		
San Francisco Hospital	461,826.52	
Sunset Health Center	385.00	
Laguna Honda Home	159,571.92	
		621,783.44
M.H. DeYoung Memorial Museum		250,242.51
Civic Center		
City Hall	15,025.76	
Civic Auditorium	5,955.00	
		20,980.76
Miscellaneous		32,889.10
TOTAL WORK COMPLETED		$9,860,550.88

CONTRACTS UNDER CONSTRUCTION

Board of Education		
New School Buildings	$5,777,266	
Miscellaneous Alterations	411,539	
		$6,188,805

Fire Department		
New Firehouses	829,078	
Alterations	151,073	
		980,151
Department of Public Health		
San Francisco Hospital	106,499	
Laguna Honda Home	270,869	
		377,368
Civic Center		
City Hall		7,199
DeYoung Museum		2,575
Department of Public Welfare		
150 Otis Street		41,166
Disaster Council		
Ground Observer Shelter		2,986
Youth Guidance Center		20,589
TOTAL WORK UNDER CONSTRUCTION		$7,620,839

WORK UNDER PREPARATION

Board of Education		
New Schools	$5,654,000	
Miscellaneous Alterations	190,000	
		$5,844,000
Department of Public Health		
Laguna Honda		
Bond Projects	3,167,500	
Non-Bond Projects	433,650	
San Francisco Hospital		
Bond Projects	1,310,000	
Non-Bond Projects	532,852	
		5,444,002
Fire Department		
New Firehouses	519,000	
Reconstruction	844,579	
		1,363,579
Miscellaneous Work		
(See Detail in Appendix II)	3,206,835	
TOTAL ALL WORK UNDER PREPARATION		$15,858,416

WORK IN PRELIMINARY DESIGN STAGE

Department of Public Health		
Laguna Honda Home	$1,767,104	
San Francisco Hospital	4,480,500	
		$6,247,604
Fire Department		
New Firehouses	600,000	
		600,000
TOTAL WORK IN PRELIMINARY DESIGN STAGE		$6,847,604
TOTAL - ALL WORK COMPLETED, UNDER CONSTRUCTION, UNDER PREPARATION, AND IN PRELIMINARY DESIGN STAGE		$40,187,409.88

FUNSTON-SANTIAGO JUNIOR HIGH SCHOOL

Under Construction

July 1, 1955

SUNNYDALE SCHOOL ADDITION UNDER CONSTRUCTION

July 1, 1955

SAN MIGUEL SCHOOL

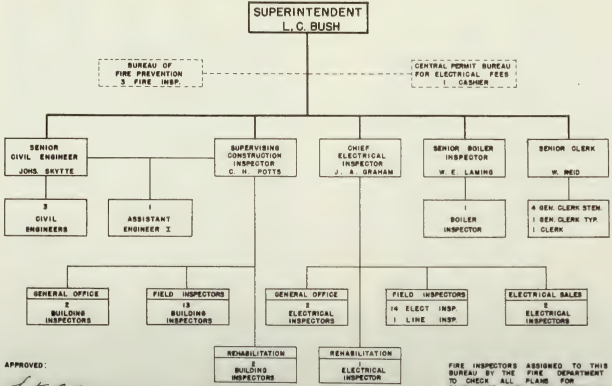
July 1, 1955

ENGINE 10 - FIRE COLLEGE AND DRILL TOWER

July 1, 1955

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART
BUREAU OF BUILDING INSPECTION


SUPERINTENDENT L. C. BUSH
BUREAU OF FIRE PREVENTION 3 FIRE INSP.
CENTRAL PERMIT BUREAU FOR ELECTRICAL FEES 1 CASHIER
SENIOR CIVIL ENGINEER JOHS. SKYTTE
SUPERVISING CONSTRUCTION INSPECTOR C. H. POTTS
CHIEF ELECTRICAL INSPECTOR J. A. GRAHAM
SENIOR BOILER INSPECTOR W. E. LAMING
SENIOR CLERK W. REID
3 CIVIL ENGINEERS
1 ASSISTANT ENGINEER I
1 BOILER INSPECTOR
4 GEN. CLERK STEN.
1 SEN. CLERK TYP.
1 CLERK
GENERAL OFFICE 2 BUILDING INSPECTORS
FIELD INSPECTORS 13 BUILDING INSPECTORS
GENERAL OFFICE 2 ELECTRICAL INSPECTORS
FIELD INSPECTORS 14 ELECT INSP. 1 LINE INSP.
ELECTRICAL SALES 2 ELECTRICAL INSPECTORS
REHABILITATION 2 BUILDING INSPECTORS
REHABILITATION 1 ELECTRICAL INSPECTOR

APPROVED:

Lester C. Bush
LESTER C. BUSH, SUPERINTENDENT
BUREAU OF BUILDING INSPECTION

FIRE INSPECTORS ASSIGNED TO THIS BUREAU BY THE FIRE DEPARTMENT TO CHECK ALL PLANS FOR COMPLIANCE WITH FIRE CODES AND TO REPORT TO SUPERINTENDENT ON ALL NONCONFORMITIES WITH BUILDING CODES.

BUREAU OF BUILDING INSPECTION

Lester C. Bush, Superintendent

FUNCTIONS

For the purpose of ensuring compliance with City ordinances, the Bureau of Building Inspection reviews plans and inspects construction and installations involving structural, electrical and mechanical work throughout the City. It also studies and reports on legislation affecting buildings and structures, and proposes new legislation as required.

BUILDINGS AND STRUCTURES

The Bureau consults with architects, engineers, contractors and home owners in the preliminary stages of the preparation of their plans whether for new buildings or for alterations to existing buildings.

The Bureau examines and reports on all applications for permits submitted to the Department of Public Works for new buildings, alterations to existing buildings, billboards and signs (electric and non-electric); inspects all this work as it progresses, makes a final inspection of new buildings or where a change of occupancy classification occurs, and issues Certificates of Final Completion when the work is finished.

Four "called inspections" on buildings under construction are made at the following times:

a. Foundations or other concrete forms must be inspected and approved before concrete is poured.

b. Inspection before interior lathing. This is to see that all bracing, framing and firestops are installed.

c. Inspection before exterior or structural plaster is in place.

d. Final inspection prior to occupancy.

ELECTRICAL WORK

The Bureau regulates and supervises the installation of interior electric wiring of commercial, industrial and residential buildings and insures by frequent and adequate inspection that the standards provided for in City Ordinances, State and National Codes are maintained. Closely tied in with the inspection of interior wiring of buildings are other activities of the Bureau made necessary by the provisions of electrical ordinances affecting other City Departments, and which entail cooperation with the Bureau of Fire Prevention and Public Safety, Police Department, Health Department, and with the Division of Industrial Safety of the State of California. Some of these activities are summarized in the following paragraphs.

Reports of fire presumably caused by defective electrical installations and all places reported to be of potential electrical hazard are also checked by the electrical inspectors.

Coin operated amusement devices with electrical controls are licensed by the Police Department and, before issuance of permit, are required to meet the approval of the electrical inspector.

Night clubs and places of public assembly are licensed through the Health Department and, before a permit to operate is granted, the requirements of this Bureau in regard to adequate lighting and emergency exits must be complied with.

A copy of all complaints and violations of the Electrical Safety Orders of the State of California issued to property owners is filed with this Bureau, is checked and verified by the electrical inspectors, and is held in the files until final approval is given.

State of California laws require that the electrical installation of wiring circuits, fixtures, signs, motors and electrical appliances be made by contractors licensed by the State, and San Francisco ordinances require that such licensed contractors be registered with the Bureau. Industrial plants which have their own plant electricians must also register with the Bureau.

All spray painting establishments in the City of San Francisco are licensed through the Bureau of Fire Prevention and Public Safety, and before licenses are issued the electrical work connected therewith must be approved by this Bureau.

BOILERS AND AIR TANKS

Steam boilers and air pressure tanks are inspected to ensure compliance with all existing laws.

PERSONNEL

The personnel of this Bureau as of June 1955 consisted of 54 persons in the various classifications shown on the accompanying organization chart.

ORGANIZATION

The organization of the Bureau is shown on the accompanying chart. Duties of the various members of the staff are described in the following paragraphs.

Superintendent - In addition to supervising the office, he takes an active part in the deliberations of various departments of the City government as well as other organizations with reference to matters of building construction, the building code, and building safety.

Supervising Construction Inspector - Acts as assistant to the Superintendent in the field; assigns and supervises the work of building inspectors; prepares records and reports; and checks construction progress.

Building Inspectors - One building inspector assists the Supervising Construction Inspector. He assists the public at the counter and provides them with the information they seek concerning various building regulations.

One building inspector represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals with the exception of new construction. He inspects and reports on all night clubs, dance halls, and condemnations, when requested by the Police Department or the Department of Public Health.

Thirteen building inspectors are assigned to specific districts into which the City is divided and are charged with the responsibility for inspection work in their respective districts.

This includes new construction of all types, alterations, billboards and signs. They report on all applications for construction in their districts prior to examination by the divisions of the Bureau; prepare and post Certificates of Final Completion; check and follow up complaints; interview property owners; and appear before courts in matters of condemnation and prosecution.

Boiler Inspectors - Make all installation inspections where any pressure vessel is installed. Inspect all boilers and air pressure vessels regularly when they are not insured and inspect and recommend repairs to defective equipment.

As deputy state inspectors, they must check all requests made by the Division of Industrial Safety and report any action taken by the City. They investigate all accidents where pressure vessels are involved and report the probable cause to the State and to the National Board of Boiler and Pressure Vessel Inspectors.

One inspector is a member of the A.S.M.E. Boiler Code Committee and passes on all new A.S.M.E. code changes and submits his report each month to the New York office of the A.S.M.E.

Complaints about pressure vessels are investigated and the necessary action taken to eliminate any defects or violations if found.

Senior Engineer (Civil) - Acts as Chief Structural Engineer and as principal assistant to the Superintendent; reviews engineering data submitted for approval of new materials and assemblies and makes recommendations to the Superintendent regarding such approvals; and supervises the work of the other engineers in the Bureau.

Structural Engineers (Civil) - Check and report on all plans pertaining to structural engineering; make field inspections; follow up matters concerning structural safety brought to their attention by the Supervising Construction Inspector or the district building inspectors; and assist other departments, or bureaus in structural matters.

One Engineer, Civil, examines all plans and details for new construction and estimates the cost thereof. He also represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals which concern new construction.

Senior Clerk - In charge of all clerks in the Bureau.

Chief Electrical Inspector - Under general direction assigns, supervises and reviews the work of electrical inspectors; approves or disapproves plans and specifications for electrical installations; supervises the maintenance of inspection records; and makes required reports.

Two electrical inspectors are detailed to the enforcement of the Electrical Sales Ordinance. This ordinance governs the sale, display, or giving away as a premium, all electrical material, devices and appliances designed for attachment to, or installation in or on any electrical circuit or system for light, heat or power. This entails visiting all retail stores, premium stores, factory agents, jobbers, manufacturers, and wholesalers to inspect all materials, devices, and appliances, and to determine whether they are approved by this department before they can be sold, displayed, or installed in San Francisco. In many cases this means granting a provisional approval on articles that have been submitted to Underwriters' Laboratories, Inc., for testing but testing not having been completed, allows a manufacturer to install or sell these appliances or materials with the proviso that any corrections required be made in the field. There are 2079 retail stores registered under this ordinance at present which are visited regularly for the purpose of inspecting the merchandise. As more merchants are going into business all the time and many ownerships are being changed, it is necessary to visit these stores to check their registration and inspect their merchandise.

The Line Inspector - Inspects all installations, alterations, and maintenance of overhead lines owned and operated by public and private utilities used for the purpose of distributing electric power, light, communication and signal transmission, to see that they conform to the Rules for Overhead Line Construction (G.O. 95), Public Utilities Commission, State of California, and the San Francisco Electrical Code. The line inspector also checks plans and specifications, and inspects all overhead lines pertaining to trolley coach installations. He inspects temporary electrical street decorations when supported by trolley span wires, or messengers and inspects installations of radio and television antennas. He checks all underground districts to see that they are kept clear of all overhead wires and cables and checks the erection of scaffolds that may be in proximity to high voltage lines.

Two electrical inspectors are assigned to office work. They handle all complaints and requests for information from the public.

One electrical inspector is assigned to the Urban Renewal Program.

Fourteen electrical inspectors are assigned to districts in the City and each handles all of the electrical work in his assigned district except those items under the Electrical Sales Ordinance.

URBAN RENEWAL PROGRAM

This program commenced with the title of Slum Clearance Program and was later changed to the title of Rehabilitation Program. With the appointment by the Mayor of the Citizen's participation Committee for Urban Renewal it is now known as the Urban Renewal Program. Under any of the titles this program has been in effect since 1953 with a minimum of personnel assigned. The recommendations of the Mayor's committee call for an accelerated program, as well as a more effective one, to establish a continuing program to eliminate or correct substandard conditions in blighted areas by requiring compliance with existing codes. All code enforcement agencies are involved. This program concerns apartment houses, hotels, rooming houses, etc.

DEPARTMENT CONDEMNATION PROGRAM

This program was placed in effect in this bureau in February 1954 under the authority granted in the San Francisco Building Code. All types of buildings are involved with the exception of occupied hotels and apartment houses which, however, may be involved where only structural or safety conditions are concerned. This program has been very effective in either restoring unsafe buildings to meet requirements of the codes, or in causing the demolition of them. This program supplements the Urban Renewal Program and accomplishes a great deal for our City.

NEW BUILDING CODE

A revised building code was forwarded to the City Attorney on June 27, 1955. This code is now in the hands of the Board of Supervisors, and should shortly be enacted. This code revises the 1947 code and, based upon the experiences gained since 1947, reflects a more comprehensive approach to building construction - in some cases less restrictive requirements have been made, in others, more. This new code provides for possible future construction materials not now in use, but which may be approved for use without a complete revision of the code.

BUILDING CONSTRUCTION

FISCAL YEAR	PERMITS	COST OF CONSTRUCTION
1951 - 1952	7488	$47,066,668
1952 - 1953	8494	45,920,105
1953 - 1954	8601	62,470,265
1954 - 1955	8961	61,812,718

WORK DONE

The extent of routine operations of this Bureau for the fiscal years 1954-1955 and 1953-1954 is set forth in the following tabulation taken from the records of the Central Permit Bureau.

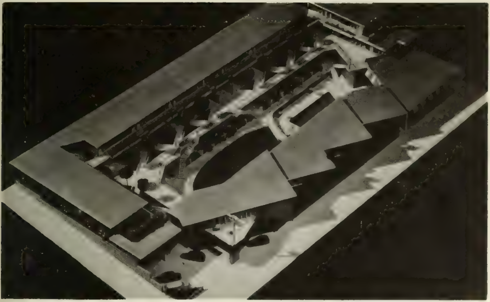
TYPE OF CONSTRUCTION	NUMBER OF PERMITS 1954-55	ESTIMATED COST	NUMBER OF PERMITS 1953-54	ESTIMATED COST
1A	8	$ 2,916,200	6	$ 8,826,463
1B	22	11,967,864	21	15,280,117
2	1	18,676	-	- -
3	43	3,544,215	38	2,352,840
4	25	1,220,675	22	463,000
5	1334	24,436,890	1117	20,244,074
Alterations	7338	17,646,322	7397	15,303,771
SUB-TOTALS	8771	$61,750,842	8601	$62,470,265
Billboards	190	61,876	273	102,142
TOTALS	8961	$61,812,718	8874	$62,572,407

Type 1A - Steel frame with reinforced concrete walls and floors. Fire-resistive construction.
Type 1B - Built entirely of reinforced concrete. Fire-resistive construction.
Type 2 - Heavy timber construction with exterior walls of masonry.
Type 3 - Wood frame floors with exterior walls of masonry. Ordinary masonry construction.
Type 4 - Light incombustible frame construction.
Type 5 - Wood frame construction.

BUREAU STATISTICS

FOR FISCAL YEAR

Inspections reported by inspectors of buildings	55,471
Projects remaining on which permits have been issued that have not been reported completed by inspectors of buildings	3,263
Complaints that have been reported adjusted by inspectors of buildings	2,753
Inspections reported by inspectors of boilers	2,061
Complaints and requests for information recorded	412
Applications for permits examined by and approved by structural engineers	4,316
Applications for permits examined and approved by plan checker	1,807
Miles traveled during the year by 29 passenger cars on inspection service	193,192
Permits issued, wiring, fixtures, signs	17,567
Inspections made	56,818
Complaints investigated (found defective)	6,405
Installations uncovered that were not with the department ("sneaked-in" jobs)	2,790
Installations in progress as of June 30, 1955	6,498
Installations completed	18,441
Pin ball machine inspections	892
Juke box inspections	140
Electrical Sales inspections	4,069
Overhead line inspections	4,665



HOLIDAY LODGE MOTEL
Northwest Corner Washington and Van Ness
Architects: Hertzka & Knowles
Photo thru courtesy of Hertzka & Knowles, Architects

S & W FINE FOODS WAREHOUSE
E. Schwerin 402' S. Sunnydale
Cahill Bros. Contractors
(Concrete Tilt-up Job)

UNIVERSITY OF CALIFORNIA HOSPITAL

3rd Avenue and Parnassus

TYPE 1-B APARTMENT HOUSE
Northwest Corner Chestnut and Hyde
Angus McSweeney, Architect

ORGANIZATIONAL RELATIONSHIPS

MAINTENANCE, REPAIR & OPERATION

Department of Public Works

1954-55

DIRECTOR
Sherman F. Duckel

Ass't. Director - Maintenance & Operation
L. J. Archer

BUREAU OF SEWER REPAIR & SEWAGE TREATMENT

B. Benas, Superintendent

Functions

1 Maintenance and Repair of Sewer System
2 Operation and Maintenance of 14 Sewage Pump Stations
3 Operation and Maintenance of 3 Sewage Treatment Plants
4 Control of Industrial waste Discharge to Sewers
5 Advisory Service to other City Departments on Sewage Treatment

Personnel Allowance

(a) Budgeted	236
(b) Assigned from other Bureaus	3
(c) Contract employees on hired trucks	10
Total	249

Fund Allowance

(a) Budgeted by Bureau	$ 1,710,245.83
(b) Funds from other Sources	1,327.71
Total	$ 1,711,573.54

BUREAU OF STREET REPAIR

P. D. Brown, Superintendent

Functions

1 Maintenance and Repair of Public Streets
2 Operation and Maintenance of 3 Lift Bridges
3 Operation and Maintenance of Asphalt Plant
4 Operation of Granite Curb Yard
5 Operation & Maintenance of Broadway Tunnel
6 Removal of Earth Slide Deposits from Street Areas

Personnel Allowance

(a) Budgeted	172
(b) Assigned from other Bureaus	1
(c) Contract employees on hired trucks	8
Total	181

Fund Allowance

(a) Budgeted by Bureau	$ 1,342,935.51
(b) Funds from other Sources	61,322.80
Total	$ 1,404,258.31

BUREAU OF BUILDING REPAIR

W. C. Zecher, Superintendent

Functions

1 Maintenance and Repair of Public Buildings & Structures
2 Repair of Monuments in Street Areas
3 Provide Operating Personnel in Certain Buildings
4 Paint Street Striping and Markings
5 Repair of Street Structures and Sidewalks

Personnel Allowance

(a) Budgeted by Bureaus	330
(b) Assigned from other Bureaus	3
(c) Contract employees on hired trucks	1
Total	334

Fund Allowance

(a) Budgeted by Bureau	$ 1,584,247.91
(b) Funds from other Sources	898,559.61
Total	$ 2,482,807.52

BUREAU OF STREET CLEANING

S. J. Sullivan, Superintendent

Functions

1 Cleaning Public Street Surfaces
2 Cleaning 5 Pedestrian Underpasses
3 Cleaning 2 Pedestrian & Vehicular Tunnels
4 Planting & Maintaining Street Trees, Shrubbery & Ground Cover

Personnel Allowance

(a) Budgeted by Bureau	357
(b) Assigned from other Bureaus	1
(c) Contract employees on hired trucks	1
Total	359

Fund Allowance

(a) Budgeted by Bureau	$ 1,635,016.96
(b) Funds from other Sources	--
Total	$ 1,635,016.96

MAINTENANCE AND OPERATION

Lawrence J. Archer, Assistant Director of Public Works

Maintenance and Operation activities of the Department of Public Works are centered at 2323 Army Street in the four bureaus of Sewer Repair and Sewage Treatment, Street Repair, Building Repair and Street Cleaning.

Maintenance work including repairs, covers the requirements, so far as funds are available, for 315 public buildings, 900 miles of improved streets, about 800 miles of sewer system exclusive of side sewers to private property, 5 pedestrain underpasses, and other additional similar work authorized by work order procedure from other departments.

Operating personnel are provided at the City Hall, Hall of Justice, the Maintenance Yard at 2323 Army Street, 3 sewage treatment plants, 14 sewage pumping stations, the Street Cleaning Yard at 2350 - 19th Avenue, 2 disposal areas, 3 lift bridges over navigable waters, one municipal asphalt plant and the Broadway vehicular and pedestrian tunnel.

The number of employments authorized in the Maintenance and Operating Bureaus total 1095, a net increase of 102 persons during the year due to the transfer of Sewage Treatment Plant personnel to the Bureau of Sewer Repair and Sewage Treatment. The employments cover 71 position and job classifications. Additionally, there are 8 engineering and clerical positions assigned to the maintenance and operating bureaus from other bureaus of the department and 20 contract employees assigned on hired trucks.

Funds provided for the services of maintenance and operation bureaus during the year amounted to a total of about $7,233,656, including both budget appropriations and funds received by work order from other sources.

The chart facing this page indicates, in brief detail, the organizational relationship of the maintenance and operating bureaus, including fund and personnel allowances.

GENERAL REVIEW OF YEAR'S WORK

In general the work of the bureaus continued at about the same level as during the preceding year except for the additional assignment of 3 existing sewage treatment plants and 2 new sewage pumping plants to the administrative control of the Bureau of Sewer Repair and Sewage Treatment

The supervisory personnel of the bureaus continued to contribute commendable assistance toward improvement in methods of operation.

Changes in Supervisory Personnel

The valued services of the following supervisory persons were separated through retirement from City employment after years of meritorius accomplishment.

NAME	POSITION	SERVICE YEARS IN DEPARTMENT	DATE RETIRED
E.F. Muheim	Superintendent Bureau Sewer Repair	40	9-1-54
H.H. Hanssen	Superintendent Bureau of Building Repair	30	1-1-55
T. Shaughnessy	General Foreman Steamfitter Bureau of Building Repair	33	5-1-54

The following persons were appointed to supervisory positions during the year:

NAME	POSITION	DATE APPOINTED
B. Benas	Superintendent Bureau of Sewer Repair and Sewage Treatment	12-1-54
W.C. Zecher	Superintendent Bureau of Building Repair	3-16-54
R.R. Sotter	Assistant Superintendent Bureau of Building Repair	12-16-54
T. McDowell	Assistant Superintendent Bureau of Building Repair	3-28-55
B.W. Smith	General Foreman Steamfitter Bureau of Building Repair	9-1-54

Sewage Treatment Plants

Department of Public Works Order No. 44,806, of December 3, 1954, transferred the administrative control of the Division of Sewage and Waste Treatment from the Bureau of Engineering to the Bureau of Sewer Repair. The same order also changed the title of the Bureau of Sewer Repair to the title of Bureau of Sewer Repair and Sewage Treatment to include the expanded service.

The Division of Sewage and Waste Treatment had been a line function of the Bureau of Engineering since 1939 in order to:

1. Collect basic data for use in the design of the proposed new plants.
2. Assist in the planning of new sewage treatment facilities.
3. Act as coordinators between construction and design in gaining operational needs during the construction of the new plants.

Transfer of administrative control was principally made for the reasons that: (a), the need for correlation between operation and design in connection with sewage treatment has lessened as the presently constructed sewage facilities will serve the City for many years without major additions; (b), the operation and maintenance of sewers, sewage treatment plants and control of waste discharges are closely related and as such should be under one administrative control.

The Division of Sewage and Waste Treatment has the responsibility of the following 3 treatment plants:

1. Richmond-Sunset Plant - Golden Gate Park
    - (a) Constructed in 1938 at a cost of $527,364; enlarged in 1948 at a cost of $879,094; subsequent miscellaneous costs, $4,791.
    - (b) Contract Costs: $1,411,249 including about $1,000,000 worth of equipment.
    - (c) Area of site 4.5 acres in Golden Gate Park.
    - (d) Plant capacity: Dry weather, 15mgd; stormwater, 45mgd.
    - (e) Number of buildings: 6.
    - (f) Number of employees: 20.

2. North Point Plant - 111 Bay Street

    (a) Constructed: 1951

    (b) Contract cost: about $8,500,000 including about $3,500,000 worth of equipment

    (c) Area of site: 8 acres.

    (d) Plant Capacity: dry weather, 65mgd; stormwater, 150mgd.

    (e) Number of buildings: 7.

    (f) Number of employees: 33.

3. Southeast Plant - 1700 Jerrold Avenue

    (a) Constructed: 1951

    (b) Contract Cost about: $7,000,000, including about $3,500,000 worth of equipment.

    (c) Area of site: 16 acres.

    (d) - (1) Sewage Treatment Facilities - Plant capacity: dry weather, 30mgd; stormwater 70mgd.
        (2) Sludge Processing facilities for North Point and Southeast Plants.

    (e) Number of buildings: 10.

    (f) Number of employees: 47.

In addition to the number of employees indicated at the above plants, one Senior Engineer is assigned to direct supervision of the plants and one Assistant Engineer is assigned to Industrial Waste Control.

Sewage Pump Stations

Two new sewage pumping stations were placed in operation during the year as follows:

Hunters Point, Hunters Point vicinity of Hudson Avenue and Hunters Point Boulevard.

(a) Contract completed, August 13, 1954 by Western Plumbing and Heating Company and W. Lenkeit as a joint venture, at a total cost of $149,470.45.

(b) Placed in operation: October 1, 1954.

(c) Maximum pumping capacity: 1225 gpm against a dynamic head of 40 feet.

Pinelake, Pinelake near Crestlake Drive and Wawona Street.

(a) Contract completed October 22, 1954 by Hart & Hynding Co., at a total cost of $29,468.25 as a replacement of an old station of the same name.

(b) Placed in operation: October 23, 1954.

(c) Maximum pumping capacity: 130 gpm against a dynamic head of 62 feet.

Fourth Street Lift Bridge

Operation of the Fourth Street Lift Bridge, over Channel Street Waterway, was discontinued during the hours of 8 P.M. to 4 A.M., starting July 16, 1954 except for emergency purposes.

The record of bridge openings between 8 P.M. to 4 A.M., for the 38 months prior to the change in operating hours, had shown an average number of about 15 openings a year or only an average of a little more than one opening a month.

Upon discontinuance of the shift, the personnel were reassigned to vacancies in the department thereby reducing the cost of operation of the bridge by about $14,400 a year, or an annual decrease in expense of about 33 percent.

New Municipal Asphalt Plant, Quint and Jerrold Avenues

A new municipal asphalt plant was placed in operation by the Bureau of Street Repair on May 9, 1955 in replacement of the antiquated plant at Florida and Treat Streets that had been in service since April 1915.

The contract for construction of the new plant was awarded on May 5, 1954 to Hart & Hynding Inc. Total cost of the plant as accepted by the City on May 13, 1955 was $418,753.

The new plant has a designed mixing capacity of 90 tons per hour as compared to an output capacity of about 35 tons per hour at the old plant.

Street Planting Program

City Ordinance No. 8993, approved February 9, 1955, placed street plantings of trees, shrubbery and ground-cover under the jurisdictional responsibility of the Department of Public Works with specific duties to:

(a) Develop and establish an official Street and Sidewalk Planting Program and to propose modification of same when desirable.

(b) Plant, maintain, or remove trees, shrubs or ground-cover in street areas and to plant, maintain, or remove trees in sidewalk areas in accordance with the Official Street and Sidewalk Planting Program.

(c) Request budget funds adequate for maintenance and an orderly planting program.

(d) Encourage proper planting and maintenance of trees by private persons, and to advise persons to plant according to the Official Street and Sidewalk Planting Program.

There are about 5,550 existing street trees of varying age and size that will require maintenance by this department , exclusive of substantial plantings of shrubs and ground cover in Sunset Boulevard, Junipero Serra Boulevard, Stanley Drive and elsewhere. These trees alone have a valuation roughly estimated at $550,000.

An appropriation request in the amount of $122,294 was initiated April 1955 based upon the following considerations:

(a) Maintenance by this department of such planted areas as have been cared for by the Recreation-Park Department under work order from this department as a charge against County Gas Tax Funds; those street trees planted by the Recreation-Park Department, in previous tree planting programs and presently maintained by that department, and those recent planted areas that this department has maintained by means of diverting crews from their regularly assigned work with consequent neglect to this latter work.

(b) Street plantings presently maintained by private individuals or organizations and by City departments, except as noted by above Item (a), to continue as such private or public responsibilities.

(c) Confining work under this department, during 1955-56, to the maintenance of the presently established areas, the developing of a tree planting program and the promulgation of rules and regulations for efficient operation.

(d) Securing the services of reputable individuals for advisory consultation, including the furnishing of a limited number of experimental trees and the providing of 2 full-time skilled "tree-men" to work with and train City personnel in the proper pruning of trees and shrubbery.

The requested amount of $122,294 was reduced to an appropriated amount of $78,885; a decrease of $43,409 or about 35 percent. This curtailed appropriation does not provide sufficient funds to fulfill the directing terms of the Ordinance requirements and unless supplementary funds are received the de partment will be faced with deciding whether to spread the deficient appropriation over all plantings with the consequent neglect to each or to properly take care of a part of the plantings and neglect the care of the remaining plantings. Either course of action could lead to an increase in injury law suits, the loss of substantial investment in the plantings and to a neglected appearance of the medium solely intended to enhance the appearance of the public thoroughfares.

Maintenance and Repair of Public Buildings

The proper fulfillment of the Bureau of Building Repair's responsibility in the making of physical property surveys of 315 public buildings to determine their maintenance and repair needs was severely handicapped through lack of technical personnel to perform the service. To overcome this inadequacy the 1955-56 budget appropriation provides for the employment of one Assistant Engineer II and one Senior Architectural Draftsman.

RAINFALL

Rainfall has considerable bearing upon the extent and nature of field operations during the winter months. The annual rainfall for San Francisco, as recorded by the Federal Weather Bureau from June 30, 1954 to July 1, 1955 amounted to 15.74 inches as compared to a rainfall of 14.27 inches in 1953-54 and an average rainfall of 20.51 inches for the locality.

Monthly precipitation, in inches, was as follows:

July, 1954	0.03	January, 1955	4.05
August	0.20	February	1.18
September	Trace	March	0.29
October	0.24	April	1.49
November	2.55	May	0.04
December	5.67	June	Trace

EMPLOYMENTS

The Salary Ordinance of 1954-55 allowed a total of 1095 positions in the maintenance and operation bureaus- a net increase of 102 positions, as follows:

Bureau of Sewer Repair and Sewage Treatment	Decrease	Increase
(a) Personnel of Sewage Treatment Plants transferred from Bureau of Engineering without change in number of positions	-	102
(b) Junior Operating Engineers assigned to new Hunters Point, Mariposa Sewage Pumping Stations and general assignment	-	3
Bureau of Street Repair		
(a) Vacancy in laborer classification not refilled	3	-
(b) Interdepartmental positions eliminated	10	-
Bureau of Building Repair		
(a) Employment of Assistant Superintendent	-	1
(b) Employment of additional mechanics (San Francisco Hospital - 3 painters, 1 plumber, 1 electrician and 1 steamfitter; Laguna Honda Home - 1 painter and 1 carpenter)	-	8
(c) Employment of additional Armature Winder on Interdepartmental Service	-	1
TOTALS	13	115
NET INCREASE		102

The Salary Ordinance for 1955-56 provides a total of 1104 positions as compared to the total of 1095 positions allowed in 1954-55; a net increase of 9 positions resulting from the allowance of 14 new employments for the new tree planting program and and the decrease of 5 former positions in the bureaus.

Table A provides a tabulation of employment allowances during the past 5 years.

EXPENDITURES

Expenditures from budgeted funds of the maintenance and operation bureaus amounted to a total of $6,272,446 in 1954-55 as compared to a total of $5,295,627 in 1953-54 - an increase of $976,819. The increased cost of operation was due mostly to the addition of Sewage Treatment facilities and also to salary and wage increases.

With an estimated total population of 805,000 for the City and County of San Francisco on January 1, 1955, the year's expenditures from budgeted funds of the maintenance and operation bureaus amounts to $7.79 per capita.

A breakdown of expenditures is tabulated in Tables B, C, and D.

TABLE A

POSITIONS ALLOWED BY ANNUAL SALARY ORDINANCES

FISCAL YEARS 1950-51 TO 1954-55 INCLUSIVE

	1950-51	1951-52	1952-53	1953-54	1954-55
Bureau of Sewer Repair and Sewage Treatment	138	136	130	123	123
Sewage and Waste Treatment	*	*	*	*	102
Pumping Stations	8	8	8	8	11
Totals	146	144	138	131	236
Bureau of Street Repair					
Street Repair	135	134	131	151	148
Bridges and Tunnels	23	23	23	24	24
Interdepartmental Serv.	50	50	36	10	--
Totals	208	207	190	185	172
Bureau of Street Cleaning					
Street Cleaning	332	332	332	332	332
As Needed Service	25	25	25	25	25
Totals	357	357	357	357	357
Bureau of Building Repair					
Building Repair	124	125	157	187	196
Interdepartmental Serv.	168	177	162	133	134
Totals	292	302	319	320	330
TOTAL FOR MAINTENANCE AND OPERATION	1,003	1,010	1,004	993	1,095

*Operation of Sewage and Waste Treatment was transferred December 3, 1954 to the Bureau of Sewer Repair without change in number of personnel.

NOTE: Interdepartmental and As Needed Services are not established as continuing positions but are for services as required when funds are provided for the purpose involved.

TABLE B

EXPENDITURE RECORD
FISCAL YEARS 1953-54 AND 1954-55
AS BUDGETED BY THE BUREAUS INDICATED

Bureau of Sewer Repair and Sewage Treatment	Gross Expenditures 1953 - 1954	Gross Expenditures 1954 - 1955
1. Sewer Repair Division		
a) Salaries and Wages	$ 497,999.49	$ 523,151.74
b) Contractual Services	31,377.89	30,197.63
c) Truck Hire	60,117.23	64,793.97
d) Materials and Supplies	43,342.06	42,229.25
e) Equipment (new and replacement)	8,596.34	20,110.18
f) Side Sewers (paid by property owners)	108,555.00	119,775.19
g) Services of Other Departments	9,329.43	9,539.00
Sub-Total	$ 759,317.44	$ 809,796.96
2. Sewage and Waste Treatment Division		
a) Salaries and Wages	--	$ 535,492.48
b) Contractual Services	--	43,125.33
c) Heat, Light and Power	--	116,636.30
d) Materials and Supplies	--	121,582.62
e) Equipment (new and replacement)	--	2,344.10
Sub-Total	--	$ 819,180.83*
*NOTE: Transferred to S.R. & S.T., 12/3/54		
3. Pump Stations Division		
a) Salaries and Wages	$ 42,202.22	$ 55,068.21
b) Contractual Services	27,983.01	21,763.62
c) Materials and Supplies	1,685.38	2,119.35
d) Equipment (new and replacement)	5,742.20	416.86
e) Services of Other Departments	2,193.24	1,900.00
Sub-Total	$ 79,806.05	$ 81,268.04
TOTAL BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT	$ 839,123.49	$1,710,245.83

TABLE B (Continued)

	Gross Expenditures	
	1953 - 1954	1954 - 1955
Bureau of Street Cleaning		
a) Salaries and Wages	$1,479,284.96	$1,490,516.86
b) Contractual Services	63,681.52	61,125.75
c) Truck Hire	6,391.91	7,500.00
d) Heat, Light and Power	72.92	96.32
e) Materials and Supplies	32,110.05	32,064.98
f) Equipment (new and replacement)	51,689.21	39,828.04
g) Services of Other Departments	3,899.08	3,885.00
TOTAL BUREAU OF STREET CLEANING	$1,637,129.65	$1,635,016.96
Bureau of Street Repair		
1. Street Repair Division		
a) Salaries and Wages	$ 681,614.50	$ 691,299.26
b) Contractual Services	76,229.20	80,173.12
c) Truck Hire	45,558.87	52,278.00
d) Materials and Supplies	174,786.76	171,460.99
e) Equipment (new and replacement)	31,407.78	30,004.76
f) Fixed Charges	5,936.43	6,636.06
g) Retirement Allowance	135,990.86	152,069.24
h) Services of Other Departments	8,467.54	9,249.00
Sub-Total	$1,159,991.94	$1,193,170.43
2. Bridge and Tunnel Division		
a) Salaries and Wages	$ 124,433.51	$ 122,238.32
b) Contractual Services	46,891.74	18,814.46
c) Materials and Supplies	2,911.23	2,343.30
d) Equipment (new and replacement)	428.48	--
e) Services of Other Departments	6,260.76	6,369.00
Sub-Total	$ 180,925.72	$ 149,765.08
TOTAL BUREAU OF STREET REPAIR	$1,340,917.66	$1,342,935.51

TABLE B (Continued)

	Gross Expenditures 1953 - 1954	Gross Expenditures 1954 - 1955
Bureau of Building Repair		
1. Maintenance, Repair and Operation Divisions		
a) Salaries and Wages	$ 719,954.35	$ 805,266.99
b) Contractual Services	23,474.35	23,976.28
c) Truck Hire	1,275.51	1,716.72
d) Maintenance and Repairs to Public Buildings	444,900.39	457,574.45
e) Monuments, Statues (maintenance)	26.08	50.00
f) Materials and Supplies	38,494.45	43,476.34
g) Fuel Oil	32,475.99	34,822.07
h) Equipment (new and replacement)	27,401.80	18,253.81
i) Services of Other Departments	3,940.40	7,225.00
Sub-Total	$1,291,943.32	$1,392,361.66
2. Traffic Striping Division		
a) Salaries and Wages	$ 132,676.00	$ 132,994.56
b) Contractual Services	3,687.00	3,945.19
c) Materials and Supplies	50,150.00	54,946.50
Sub-Total	$ 186,513.00	$ 191,886.25
TOTAL BUREAU OF BUILDING REPAIR	$1,478,456.32	$1,584,247.91
TOTAL FOR MAINTENANCE AND OPERATION BUREAUS	$5,295,627.12	$6,272,446.21

TABLE C - SUMMARY

INTERDEPARTMENTAL AND OTHER EXPENDITURES NOT BUDGETED BY MAINTENANCE AND OPERATION BUREAUS

BUREAU		EXPENDITURES
Sewer Repair and Sewage Treatment		
a) Building Repair	$ 1,064.79	
b) DeYoung Museum	262.92	
		$ 1,327.71
Street Repair		
a) Bureau of Building Repair	4,304.36	
b) Public Utilities	13,363.82	
c) Bureau of Sewer Repair	31,405.12	
d) Bureau of Engineering	5,358.62	
e) Board of Education	4,314.46	
f) Others	2,576.42	
		$ 61,322.80
Building Repair		
a) Board of Education	788,301.52	
b) School Bonds	5,658.04	
c) Recreation Park	8,149.47	
d) War Memorial	5,220.09	
e) Legion of Honor	5,832.78	
f) D.P.W. Engineering	40,673.47	
g) D.P.W. Street Repair	12,465.40	
h) Public Utilities Commission	10,930.72	
i) Miscellaneous (25 Agencies)	21,328.12	
		$898,559.61
GRAND TOTAL		$961,210.12

TABLE D - SUMMARY

TOTAL EXPENDITURES BY MAINTENANCE AND OPERATION BUREAUS

Bureau	Expenditure From Bureau's Budgeted Funds	Expenditure From Funds of Other Sources	Total Expenditures
a) Sewer Repair and Sewage Treatment	$1,710,245.83	$ 1,327.71	$1,711,573.54
b) Street Repair	1,342,935.51	61,322.80	1,404,258.31
c) Building Repair	1,584,247.91	898,559.61	2,482,807.52
d) Street Cleaning	1,635,016.96	--	1,635,016.96
TOTAL	$6,272,446.21	$961,210.12	$7,233,656.33

BUREAU OF BUILDING REPAIR

W.C. Zecher, Superintendent

FUNCTION

The Bureau of Building Repair has different functional activities. They may be summarized as follows:

Group A: 315 City and County Buildings for which the Bureau has the responsibility to budget and provide maintenance and repair.

Group B: 21 of the above buildings for which it must, in addition, budget and provide operational service or custodial service and supplies.

Group C: Maintenance and repair of other City buildings by work order procedure. The Bureau received 16,022 repair requisitions involving 19,100 man days work during the year from the Board of Education for the 150 school buildings under its jurisdiction. Other Departments with smaller physical plants required proportionately smaller number of repairs.

Group D: Traffic painting for which it must budget and provide labor, materials, supplies and contractual services.

The title and locations of the buildings in Group A and B together with the type of service provided are listed in Table I. For Group C the departments for which work is done are listed in Table II. Traffic painting is described later in this report.

PERSONNEL

Mr. Harry H. Hanssen, Superintendent of this Bureau for the past four and one-quarter years, retired on January 1, 1955, after thirty years of faithful service with the City and County of San Francisco.

The organization chart included as part of this report shows the number and types of permanent personnel allowed to carry out the program of the Bureau during the fiscal year 1954-55. In addition various numbers of temporary personnel are employed to meet seasonal demands for interdepartmental work. The employment of an engineer and architectural draftsman (granted in 1955-56 budget) to survey, evaluate and report the need for repairs and maintenance of public buildings should assist the Bureau in fulfilling its responsibilities with increased efficiency. However, a need for additional personnel still exists to meet the continually increased work load.

Facilities

Shop and storage space was provided in the new Maintenance Yard at 2323 Army Street, in use since 1951. The shops include separate facilities for each of the nine major crafts of the Bureau. Since 1953 the work load and responsibilities of the Bureau have increased to the point where the present space allowed is insufficient in spite of the improvements which have been made to date.

Vehicles and Portable Equipment

The Bureau has 32 trucks for the transportation of personnel, materials, tools and portable equipment. The City owns 15 and rents 17. Each craft is allowed trucks with suitable tools and equipment wherever possible.

Experience and studies have shown that sufficient City owned trucks, adequately equipped and with modern means of communication are now essential. As a part of our program we are endeavoring to increase the number of City owned vehicles we have and modernize their equippage and communications to increase operating efficiency.

Traffic Painting

Painting of curbs and streets for traffic and parking control is done by this Division as required by the traffic engineer of the Department of Public Works and by the Police Department. The distribution of personnel and equipment, the agency responsible for assigning the work and the types of work performed are summarized below.

Class of Work	Number of Crews	Number Working Foreman Painters	Number Painters	Number Vehicles	Work Assigned By
Gen. Supervision		1			Traffic Engr. Police Dept.
Traffic line striping	1		4	2	Traffic Engr.
Intersections general	1	1	3	1	Traffic Engr.
School Crosswalks) Parking Meters)	1	1	3	1	Traffic Engr.
Bus Zones	1		2	1	Traffic Engr.
Curbs	3		6	3	Police Dept.
TOTALS	7	3	18	8	

The amount of work done during the year is tabulated below. The form of reporting has been changed in an attempt to describe the activity of the Division more accurately. It is hoped that the new methods now being studied will provide better control, planning and execution of the work.

Classification	Unit	Unit Amount	Gal. Paint	Man Hours
Traffic line striping	Mile	498.7	7,420	6,254
Traffic line spotting	Mile	64.5	107	1,263
Intersections - General				
a) Crosswalks (inc. words)	Mile	98.0	5,795	10,101
b) GuideLines (inc. words)	Mile	11.1	904	1,604
School Crosswalks (inc.words)	Mile	45.6	2,952	5,727
Bus Zones (inc. words)	Mile	27.4	2,014	2,876
Parking Stalls				
a) Diagonal	No.	3,358	240	572
b) 4 ft. cross	No.	5,602	192	1,032
Railroad crossings	Mile	1.6	105	178
Curb painting				
a) General	Mile	138.6	3,635	10,091
b) Taxi	Mile	2.1	70	262

Special studies and investigations carried out or now in progress include the following.

Method study comparing mechanical markers with the use of spray guns and templates for painting crosswalks, bus zones and parking spaces both diagonal and parallel.

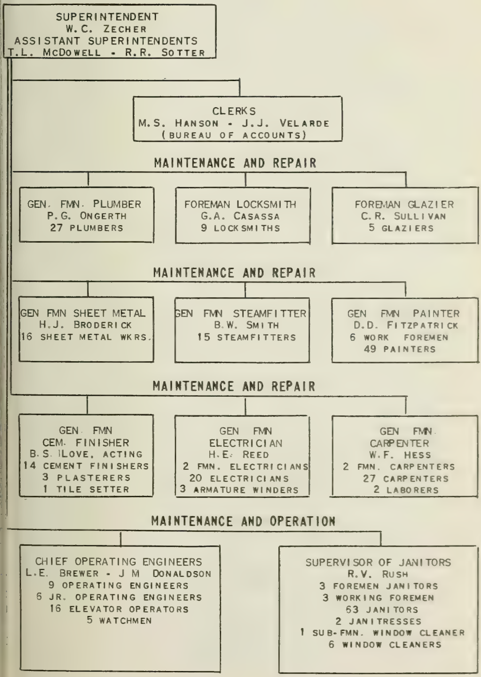
Work scheduling to permit assignment of traffic painters to other work during wet weather. This will lead to better utilization of available manpower.

Improvements for paint truck equipment to reduce operating cost and increase the work accomplished. This is a continuous and permanent study item.

As a result of investigations and studies made, a new striping truck has been ordered. This truck will incorporate the latest type of equipment for striping with flexibility for improvements, both in the equipment carried and operating methods.

The total Bureau of Building Repair Traffic Painting budget expenditures for the year was $173,492. Of this total $114,593, was for personal services consisting of painters and working foremen painters; $54,953 was for materials and supplies including paint, solvents, brushes, stencils, bags, hose, etc.; and $3,946 for contractual services including equipment repair, recapping of tires, etc.

BUREAU OF BUILDING REPAIR
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
1954 - 1955



SUPERINTENDENT
W. C. ZECHER
ASSISTANT SUPERINTENDENTS
T.L. McDOWELL - R.R. SOTTER

CLERKS
M.S. HANSON - J.J. VELARDE
(BUREAU OF ACCOUNTS)

MAINTENANCE AND REPAIR

GEN. FMN. PLUMBER
P.G. ONGERTH
27 PLUMBERS

FOREMAN LOCKSMITH
G.A. CASASSA
9 LOCKSMITHS

FOREMAN GLAZIER
C.R. SULLIVAN
5 GLAZIERS

MAINTENANCE AND REPAIR

GEN FMN SHEET METAL
H.J. BRODERICK
16 SHEET METAL WKRS.

GEN FMN STEAMFITTER
B.W. SMITH
15 STEAMFITTERS

GEN FMN PAINTER
D.D. FITZPATRICK
6 WORK FOREMEN
49 PAINTERS

MAINTENANCE AND REPAIR

GEN FMN
CEM. FINISHER
B.S. LOVE, ACTING
14 CEMENT FINISHERS
3 PLASTERERS
1 TILE SETTER

GEN FMN
ELECTRICIAN
H.E. REED
2 FMN. ELECTRICIANS
20 ELECTRICIANS
3 ARMATURE WINDERS

GEN FMN
CARPENTER
W.F. HESS
2 FMN. CARPENTERS
27 CARPENTERS
2 LABORERS

MAINTENANCE AND OPERATION

CHIEF OPERATING ENGINEERS
L.E. BREWER - J M DONALDSON
9 OPERATING ENGINEERS
6 JR. OPERATING ENGINEERS
16 ELEVATOR OPERATORS
5 WATCHMEN

SUPERVISOR OF JANITORS
R.V. RUSH
3 FOREMEN JANITORS
3 WORKING FOREMEN
63 JANITORS
2 JANITRESSES
1 SUB-FMN. WINDOW CLEANER
6 WINDOW CLEANERS

TABLE I
BUREAU OF BUILDING REPAIRS
PUBLIC BUILDINGS IN GROUPS A AND B

NOTE: M - Maintenance and Repair
O - Operational
C - Custodial

AGENCY AND BUILDING	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
DEPT. PUBLIC WORKS			
City Hall	Civic Center	1	M-O-C
Power House	Civic Center	1	M-O-C
Maintenance Yard	2323 Army St.	9	M-O-C
Hall of Justice	Kearny and Washington	2	M-O-C
150 Otis Street	150 Otis Street	2	M
Bridge	3rd and Channel	1	M
Bridge	4th and Channel	1	M
Bridge	3rd and Islais	1	M
Tunnel	Broadway	2	M
Asphalt Plant	Quint and Jerrold	2	M
Street Cleaning	2350 - 19th Ave.	1	M
Sewage pumping plants:			
Commercial	81 Commercial St.	1	M
Fitzgerald	Fitzgerald and Gilman St.	1	M
Fulton	48th Ave. and Fulton	1	M
Hunter's Point	Hudson and Hunter's Point	1	M
Hyde	Hyde and Jefferson	1	M
Lakeshore	Lakeshore Blvd.	1	M
LaPlace Canyon	Portola Drive	1	M
Marina	Marina Blvd. and Casa Way	1	M
Mariposa	Mariposa and Illinois	1	M
Park Merced	Lake Merced Blvd.	1	M
Pinelake	34th and Wawona	1	M
Sea Cliff #1	Phelan Beach	1	M
Sea Cliff #2	100 Sea Cliff Ave.	1	M
Vicente	Vicente and Great Highway	1	M
Sewage Treatment Plants:			
Richmond-Sunset	Golden Gate Park and Great Highway	7	M
North Point	Bay near Kearny	10	M
Southeast	1700 Jerrold Avenue	19	M

PUBLIC BUILDINGS IN GROUPS A AND B Continued

AGENCY AND BUILDING	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
DEPT. OF PUBLIC HEALTH, EMERGENCY HOSPITALS			
Health Center Bldg.	101 Grove St.	1	M-O-C
Hassler Health Home	Redwood City	18	M
Laguna Honda Home	7th Ave. and Dewey	25	M
S.F. Hospital	22nd and Potrero	33	M
Central	135 Polk St.	1	M-O-C
Alemany	Alemany and Onondaga	1	M
Harbor	88 Sacramento	1	M
Mission	22nd and Potrero	1	M
Park	Stanyan and Waller	1	M
Ocean Beach	Great Highway near Sloat	1	M
Health Centers:			
Alemany	45 Onondaga	1	M
Eureka-Noe	498 Sanchez	1	M
Hunter's Point	177 Hilltop	1	M
Marina-No. Beach	2303 Greenwich	1	M
Northeast	799 Pacific	1	M
South of Market	101 Grove (1) (See Health Center Bldg.)		
West Side	2201 Sutter St.	1	M
Laguna Honda	Laguna Honda Home (See Laguna Honda Home)		
Veneral Disease Clinic	33 Hunt St.	1	M
POLICE DEPARTMENT			
Stations:			
Central	Hall of Justice (See Hall of Justice)		
Southern	4th and Clara	1	M-C
Potrero	2300 - 3rd St.	1	M-C
Mission	1240 Valencia	1	M-C
Northern	841 Ellis St.	1	M-C
Golden Gate Park	Stanyan off Waller	1	M-C
Richmond	451 - 6th Ave.	1	M-C
Ingleside	Balboa Park & San Jose Ave.	1	M-C
Taraval	2348 - 24th Ave.	1	M-C
Police Stables	37th Ave. and Fulton	1	M
Juvenile Bureau	2475 Greenwich	1	M-C
Police Academy	37th Ave. and Fulton	1	M-C
Police Range	Lake Merced - Skyline	1	M-C
Motorcycle Hdqtrs.	110 Clara St.	1	M-C

PUBLIC BUILDINGS IN GROUPS A AND B Continued

AGENCY AND BUILDING	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
CITY PLANNING	100 Larkin St.	1	M-O-C
RETIREMENT SYSTEM	460 McAllister St.	1	M-C
REGISTRAR OF VOTERS			
Warehouse	150 Potrero Ave.	1	M
Warehouse	1440 Broadway	1	M
PUBLIC LIBRARIES			
Main Library	Civic Center	1	M
Branch Libraries:			
Mission	24th and Bartlett	1	M
McCreery	16th and Market	1	M
North Beach	1141 Powell	1	M
Richmond	351 - 9th Avenue	1	M
Park	Page near Cole	1	M
Presidio	3150 Sacramento	1	M
Noe Valley	Jersey near Castro	1	M
Sunset	1305 - 18th Ave.	1	M
Golden Gate Valley	1801 Green St.	1	M
Excelsior	4465 Mission St.	1	M
Ingleside	387 Ashton Ave.	1	M
Glen Park	700 Bosworth	1	M
Bayview	5009 - 3rd St.	1	M
Portola	2434 San Bruno Ave.	1	M
Ocean View	111 Broad St.	1	M
Anza	37th Ave. near Geary	1	M
Visitacion Valley	37 Leland Ave.	1	M
Parkside	22nd Ave. and Taraval	1	M
West Portal	Lenox Way and Ulloa	1	M
Bernal	500 Cortland Ave.	1	M
Potrero	1616 - 20th St.	1	M
Marina	Chestnut and Fillmore	1	M
Annex	45 Hyde St.	1	M
PUBLIC WELFARE BLDG.	585 Bush St.	1	M
PURCHASING DEPT.			
Central Warehouse	15th and Harrison	1	M
Gasoline Station	Alameda and Harrison	1	M
Shop #1	313 Francisco	1	M
Shop #2	Alameda and Treat	1	M
Shop #3	1745 California	1	M

PUBLIC BUILDINGS IN GROUPS A AND B Continued

AGENCY AND BUILDING	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
SHERIFF:			
County Jail #1-#3	Hall of Justice	(See Hall of Justice)	
County Jail #2-#4	San Mateo County	7	M
REAL ESTATE DEPT.			
Civic Auditorium	Civic Center	1	M
SEALER OF WEIGHTS AND MEASURES			
Farmer's Market	Bayshore and Alemany	3	M
ADULT PROBATION DEPT.			
Youth Guidance Center	375 Woodside Ave., S.F.	15	M
Log Cabin Ranch	La Honda, San Mateo Co.	16	M
FIRE DEPARTMENT			
Chief's Residence	870 Bush St.	1	M
Engine Companies:			
No. 1	451 Pacific St.	1	M
2	460 Bush St.	1	M
3	1067 Post St.	1	M
4	676 Howard St.	1	M
6	356 - 7th St.	1	M
7	3160 - 16th St.	1	M
8	1648 Pacific St.	1	M
9	Foot of Harrison	1	M
10	19th and Folsom	2	M
11	1632 Oakdale Ave.	1	M
12	115 Drumm	1	M
13	1458 Valencia St.	1	M
14	1051 McAllister St.	1	M
15	2150 California St.	1	M
16	909 Tennessee St.	1	M
17	416 Jessie St.	1	M
18	1298 Girard St.	1	M
19	1300 - 4th St.	1	M
20	2239 Greenwich St.	1	M

PUBLIC BUILDINGS IN GROUPS A AND B Continued

AGENCY AND BUILDING	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
FIRE DEPT. - Continued			
Engine Companies Continued			
No. 21	1152 Oak St.	1	M
22	1348 - 10th Ave.	1	M
23	3022 Washington St.	1	M
24	100 Hoffman Ave.	1	M
25	3305 - 3rd St.	1	M
26	3767 Sacramento St.	1	M
27	135 Sanchez St.	1	M
28	1814 Stockton St.	1	M
29	16th and Vermont	1	M
30	Winston and Buckingham	1	M
31	1088 Green St.	1	M
32	194 Park St.	1	M
33	117 Broad St.	1	M
34	1145 Ellis St.	1	M
35	36 Bluxome St.	1	M
36	551 - 26th Ave.	1	M
37	2501 - 25th St.	1	M
38	2098 San Jose Ave.	1	M
39	1091 Portola Drive	1	M
40	1249 Clayton St.	1	M
41	1325 Leavenworth	1	M
42	2460 San Bruno	1	M
43	724 Brazil St.	1	M
44	3816 - 22nd St.	1	M
45	1348 - 45th Ave.	1	M
46	441 - 12th Ave.	1	M
47	449 - 41st Ave.	1	M
48	798 Wisconsin St.	1	M
49	2155 - 18th Ave.	1	M
Truck Companies:			
No. 2	1340 Powell St.	1	M
5	2136 Geary St.	1	M
11	315 Duncan St.	1	M
12	1757 Waller St.	1	M
18	1935 - 32nd Ave.	1	M
Bureau of Equipment	840 Octavia St.	1	M
High Pressure Pump Station #1	2nd and Townsend Sts.	1	M

PUBLIC BUILDINGS IN GROUPS A AND B Continued

AGENCY AND BUILDINGS	ADDRESS	NUMBER BLDGS.	SERVICE RENDERED
FIRE DEPT. Continued			
High Pressure Pump Station #2	Foot Van Ness Ave.	1	M
DEPT. OF ELECTRICITY			
Central Fire Alarm	Turk and Octavia	2	M
Plant	264 Golden Gate Ave.	2	M
Storage	462 Duboce	1	M

TABLE II

PUBLIC BUILDINGS IN GROUP C

(a) Departments of the Public Utilities Commission

(b) Recreation and Park Department

(c) San Francisco Unified School District

(d) War Memorial

(e) California Academy of Sciences

(f) California Palace of Legion of Honor

(g) de Young Memorial Museum

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

B. Benas, Superintendent

The Bureau of Sewer Repair and Sewage Treatment maintains and repairs the sewerage system; operates and maintains sewage pumping stations and treatment plants; and regulates and controls industrial wastes discharged to sewers. Activities pertaining to the sewerage system and pumping stations are under the Sewer Repair Division. The treatment plants and control of industrial wastes discharge are under the Sewage and Waste Treatment division. The Sewage and Waste Treatment Division was a line function of the Bureau of Engineering before December 1, 1954.

There are over 800 miles of main sewers. Most of these are of the combined type handling both surface runoff and sanitary sewage. Separate sewers are located in part of the lower Market Street area and in other isolated areas. Main sewers range in size from 6" vitrified clay pipe to three compartment reinforced concrete sewers with 7½ foot by 10 foot compartments.

About 85% of the total sanitary sewage is handled at the three treatment plants. The balance now discharging directly to the bay will be diverted for treatment when scheduled construction is completed. Excess storm flow is diverted to the bay or ocean through 16 outfalls. At 14 locations pumping stations boost sanitary flow and some storm runoff rains to main interceptors.

Close liason is maintained with the Bureau of Engineering on planning pumping and treatment plants and sewer system improvements, and on major repairs.

Budgeted employments for the fiscal year 1954-55 were 123 for Sewer Repair, 11 for Pumping Stations, and 102 for Sewage and Waste Treatment, totalling 236. These employments were supplemented by ten hired chauffeurs for Sewer Repair and seven maintenance personnel for Sewage Treatment.

SEWER REPAIR DIVISION

The Sewer Repair Division maintains and repairs main sewers and structures, cleans sewers and catch basins, installs and repairs side sewers, tests for explosive and other gases, and operates and maintains sewage pumping stations.

Maintenance and Operation

Personnel

The 134 budgeted employees are assigned as follows:

General

2 Assistant Superintendents
1 Junior Engineer, Civil
1 Clerk Typist

Sewer Repair Section

3 General Foremen
6 Bricklayers
8 Chauffeurs
10 Hod Carriers
45 Cribbers
17 Sewer Cleaners
30 Laborers
10 Hired Chauffeurs

Pumping Station Section

1 Assistant Engineer, Electrical
2 Operating Engineers
8 Junior Operating Engineers

All division operations are supervised by the two assistant superintendents. The sewage pumping section is headed by the Assistant Electrical Engineer and the sewer maintenance and repair sections by the three General Foremen.

Mr. Emile Muheim retired on September 1, 1954, after 19 years as Superintendent of the Bureau of Sewer Repair. His service and leadership are reflected in the fine accomplishment, organization and efficiency of the Bureau.

Sewer Maintenance And Repair

Maintenance and repair activities are separated into nine work units based on type of work and employments.

Table No. I shows the work assigned each unit, and the men and equipment used.

The following comments are supplementary to the table:

Sewer Cleaning

Regular cleaning operations are scheduled mainly for sewers in known flat areas. Other work is in connection with complaints and main sewer repairs. Sewers are normally cleaned by the drag and bucket method operating between two manholes.

Eductor Operations

A revised system of programming for catch basin cleaning was started in March 1955. The City was divided into eight major districts which were further divided into 360 subdistricts. One eductor crew is assigned to each major district. Routing in the district is programmed in advance by the General Foreman in charge of this operation. The Chauffeur records the location of all basins and the date cleaned or inspected on the subdistrict maps.

Servicing Complaints

This section services complaints from the public and other sources, wets down main sewers and side sewer trenches, flushes pipe sewers which have become sluggish or temporarily plugged and does all emergency work pertaining to the sewer system. Of the five crews, four are on regular day shift and one on night shift. Weekend work is scheduled in impending wet weather.

Repairing Main Pipe Sewers

Main pipe sewer repair is continually required to repair breaks from scour, settlement or poor house connections. These conditions are aggravated by winter rains causing the sub-surface soil to wash away resulting in caveins at the street level.

Repairing Brick Sewers and Structures

The area east of Divisadero Street and north of Army Street which was settled before 1906 contains about 90% of all brick sewer construction in the City. Many of these sewers have deteriorated from failure of the lime mortar used and from the natural scouring of the invert.

Repairing and Installing Side Sewers

The side sewer from the building to the main sewer belongs to the property owner. By City Ordinance all installation and repair work under City Streets on side sewer connections must be performed by this Bureau except where side sewer construction is included with main sewer construction under public contract. Before any work is started the property owner deposits the estimated amount for the work with the Central Permit Bureau. Final payment covers only actual costs. The number of men employed on this work depends on the number of permits being processed.

Gas Detection Survey

This section tests sewer manholes, pumping station and treatment plants, and other miscellaneous structures for explosive gas, carbon monoxide, hydrogen sulphide, and oxygen deficiency. Natural gas leaks are reported to the gas utility company and testing is continued until the condition is corrected. Clogged sewers, loose bricks, and sludge deposits in manholes are reported to other sections.

Tests, testing methods, and equipment used are described in detail on pages 92-95 of the Annual Report of the Department of Public Works for the fiscal year 1952-53.

During the fiscal year 5,884 manholes were tested: 174, or 3.35%, contained explosive gases in concentrations from 0.1 - 1% which is not considered dangerous; 20, or 0.34%, contained dangerous concentrations of over 1% explosive gas; 79, or 1.34%, contained carbon monoxide, all at concentrations below 0.03%; 8, or 0.014% contained hydrogen sulphide, all at concentrations below 25 ppm; and no manholes were found with an oxygen deficiency.

Repairing and Maintaining Outfall Structures

Outfall structures with tide gates which allow discharge of excess storm flow and prevent backup of bay or ocean waters require repairs, painting and other maintenance to keep in operating order. The work is done mainly by contractual services by other bureaus or departments. Required work by this bureau is done by personnel temporarily assigned from other units.

Miscellaneous Work

This work unit covered a number of miscellaneous functions such as yard service, repairs to special structures and other work which is not regularly scheduled or normally a part of the work of the other units.

Expenditures and Unit Costs

Table No. 1 shows work distribution, total expenditures by work units and unit costs where applicable. Unit costs include general department overhead and prorated allowance for equipment.

SEWAGE PUMPING STATIONS

The section operated and maintained fourteen sewage pumping stations during the 1954-55 fiscal year. Descriptive information for each of the sewage pumping stations can be found on pages 86 to 92 inclusive of the 1952-1953 Annual Report and page 96 of the 1953-1954 Annual Report with the exception of Hunters Point and the new Pinelake Stations which is hereby submitted.

Hunters Point Pumping Station

The Hunters Point Pumping Station is located on the southeast corner of Hunters Point Boulevard and Hudson Avenue. The station was completed August 13, 1954 at a cost of $149,470 and went into operation on October 1, 1954 as a unit of the Southeast Collecting System.

The contributory sanitary area covers 120 acres, irregular in shape and bounded by the shoreline of San Francisco Bay, Donahue Street from Evans Avenue to Kirkwood Avenue, along Kirkwood Avenue, Southridge Road and Hilltop Road to the summit of the Federal Housing Project; thence, east along this summit to Hunters Point Boulevard and Galvez Street. Normal daily flow is 600,000 gallons which is discharged through a 10 inch force main approximately 650 feet long. The force main runs north along Hunters Point Boulevard into a 10 inch Interception Sewer of the Southeast Collection System.

Equipment includes two 5-inch vertical, enclosed shaft, single stage, two-speed centrifugal pumps with a low speed capacity of 300 gpm against a total dynamic head of 34 feet and a high speed rating of 1100 gpm against a total dynamic head of 42 feet. Each pump is driven by a 25/14 H.P., 220 volt, 3 phase, 60 cycle electric motor of 1160/860 rpm.

Pinelake Pumping Station

The Pinelake Pumping Station is located in a ravine south of Trocadero Drive on the shore of Laguna Puerca and opposite Thirty-third Avenue extended. The station was completed at a cost of $29,500 and put into operation on October 22, 1954 as a replacement for the old, temporary Pinelake Pumping Station.

The contributory sanitary area encompasses 3 acres and is roughly triangular in shape, bounded by Crestlake Drive from Trocadero Drive to Palos Place, the shoreline of Laguna Fuerca and Trocadero Drive from Thirty-third Avenue to Crestlake Drive.

Normal daily flow is approximately 6000 gallons which is discharged through a 3-inch force main to a gravity sewer in Wawona Street and intercepted at the Richmond-Sunset Treatment Plant.

Equipment includes two 3-inch vertical, open shaft, single stage, centrifugal pumps. Each pump is rated at 100 gpm against a total dynamic head of 61 feet and driven by a 5 H.P., 220 volt, 3 phase, 60 cycle electric motor at 1750 rpm.

Personnel

During the 1954-1955 fiscal year, the personnel was increased to eleven by one additional Junior Operating Engineer for the new Hunters Point Station. Relief for Hunters Point is by the regular Junior Operating Engineer for the Mariposa and Sea Cliff #2 Pumping Stations.

At the present time, the new Fitzgerald Avenue Station is under construction and is scheduled to replace the existing temporary station on September 1, 1955.

SEWAGE AND WASTE TREATMENT

General

The Sewage and Waste Treatment Division operates the North Point, Richmond-Sunset and Southeast Sewage Treatment plants; investigates disposal of industrial wastes for conformance with existing ordinances and advises on operation of sewage treatment facilities under the jurisdiction of other City departments. Other than for planned shutdowns at the Southeast plant for construction purposes, the three plants operated continuously during the fiscal year, treating sewage from all parts of the City except limited areas along the bay shore. The unserved areas will be connected to the plants upon completion of the additional collecting sewers and pumping stations now under construction or planned for the future.

Three drainage areas totaling 120 acres and contributing an average daily flow of 600,000 gallons were added to the Southeast Collection System during the fiscal year. The following table gives pertinent data:

Outfall Intercepted	Contributing Area	Present Average Dry Weather Flow
Griffith Street (near Innes Ave.)	40 acres	200,000 gpd
Hudson Ave. (near Hunters Pt.Blvd.)	50 acres	250,000 gpd
Middle Point Road (near Evans Ave.)	30 acres	150,000 gpd

The sanitary flow plus the runoff from the light rains in the drainage areas contributing to the Griffith Street and Hudson Avenue outfalls are diverted to the Hunters Point Pumping Station, and from there to the Evans Avenue intercepting sewer. The same flow pattern in the area contributing to the Middle Point Road outfall is diverted directly into the Evans Avenue intercepting sewer.

Personnel

There was no change in the total number of Division personnel during the year. The following table shows distribution of plant personnel as of June 30, 1955, exclusive of the Senior Engineer in charge of the Division and the Industrial Waste Engineer.

TABLE VII

Classification	North Point	Richmond-Sunset	Southeast
Superintendent	1	1	1
Chemist	1	0	2
Water Chemist	2	2	2
Clerk-Stenographer	1	1	1
Chief Operating Engineer	1	1	1
Operating Engineer	6	6	7
Junior Operating Engineer	15	5	27
Janitor	1	-	1
Laborer	4	3	5
Truck Driver	1	1	-
TOTALS	33	20	47

Major bacteriological work for the Division, requiring one Water Chemist, is centralized at the North Point laboratory. A limited amount of bacteriological work is also done at the Richmond-Sunset laboratory. Engineering design for improvements is performed by other divisions of the Bureau as required. Major repairs and maintenance requiring the services of specialized crafts are done by other City forces. The Recreation-Park Department maintains landscaping at all plants.

SEWAGE TREATMENT METHODS

Each plant provides primary treatment for removal of oil, grease, floating material, grit and settleable solids. The effluent is chlorinated during designated seasons for bacterial disinfection before being discharged into the ocean or bay. Grit and screenings from the North Point and Southeast Plants are hauled by truck to the garbage fill south of the county line. At the Richmond-Sunset plant screenings are incinerated and grit is hauled to a city dump.

At the Richmond-Sunset plant, sludge is digested in two-stage digestion, elutriated and dewatered by vacuum filtration. During the past year all filter cake was hauled to city parks for use as a soil conditioner. In the future this cake will be hauled to the Southeast plant for final drying. Raw sludge collected at the North Point plant is pumped to the Southeast plant through a 10-inch diameter concrete-lined force main approximately six miles long. The sludge treatment facilities at the Southeast plant consist of raw sludge thickening, two-stage digestion, elutriation, vacuum filtration, and flash drying of sludge. Part of the dried sludge was delivered to the Recreation and Park Department for use in city parks and squares. The balance was sold under contract at a price of $5.00 per ton to a prime contractor, except for a limited amount sold at the same price to the Water Department for use in the walnut groves at Sunol.

TREATMENT PLANT OPERATION

The following table summarizes data on flows, materials removed, chemicals added and products handled, and power and gas purchased for the three plants.

SUMMARY OF TREATMENT PLANT OPERATIONS

Fiscal Year 1954-55

Sewage Flow, million gals.	North Point	Richmond-Sunset	Southeast
Total	13435	4705	5805 (a)
Max. day, wet weather	91.0	18.2(b)	30.3(b)
Max. day, dry weather	37.7	15.8	27.6
Avg. day	36.8	12.9	16.7
Max. rate, wet weather	157	29 (b)	36 (b)
Max. rate, dry weather	60	26	32
Screenings, cu.ft.			
Total	22828	10392	19811
Max. day	208	65	352
Per million gallons	1.7	2.2	3.4
Grit, cu.ft.			
Total	58376	42390	28293
Max. day	796	540	1050
Per million gallons	4.3	9.0	4.9
Chlorination, lb.(c)			
Pre	402820	135300	147640
Post	676990	310240	227360
Process water (effluent)	8520		28180
Total	1088330	445540	403180
Per million gallons (dry weather)	100	100	85
Sludge Solids, M lb. (dry)			
From sedimentation (d)	28356		27638 (e)
To digesters (f)		8946	46752
Filter cake		1766 (g)	10702
Dried sludge			9489
Ferric Chloride			
Total, lb.		62000	407600
% used based on filter cake solids		3.51	3.81
Gas Production, M cu.ft.			
Total		75349 (h)	248400
Avg. day		206 (h)	681
Power and Gas Purchased			
Power, total M kwh	4885.2	1741.6	4339.2
Power, avg/mo., M k3h	407.1	145.1	361.6
Natural gas, total, C cu.ft.	93736	71922	90212
Natural gas,avg/mo. C cu.ft	7811	5994	7518
Hauling			
Trips, grit and screenings	585		398
Trips, grit and filter cake		903	

NOTES

(a) For 347 days of operation

(b) Flow restricted during storms to avoid overloading grit handling facilities.

(c) North Point: pre-chlorination continuous; post-chlorination nine months March through November. Richmond-Sunset: pre-chlorination continuous; post-chlorination continuous except during storms. Southeast: pre-chlorination continuous; post-chlorination continuous seven months April through October.

(d) Pumped to Southeast plant raw sludge thickening tanks.

(e) Includes recirculating load from raw sludge thickening and digested sludge elutriation overflows.

(f) From raw sludge thickening.

(g) Some digested sludge discharged to outfall while cleaning secondary digester.

(h) Estimated from volatile solids in raw sludge to digestors - meters inoperable.

INDUSTRIAL WASTES

The program of sampling and analysis of industrial wastes continued during the year. Recreational waters at Aquatic Park and along the ocean beaches were examined for conformance with State Regional Water Pollution Control Board No. 2 requirements.

Industries within the Southeast Collection District were resurveyed and maps codifying industrial wastes with plants were prepared. Wastes from slaughter houses, packing plants, and rendering plants within the District were sampled and re-examined in detail. Several meetings were held with top level management of these establishments with the result that plans and studies to improve waste treatment facilities within the plants are under way.

In other Districts, field surveys were limited to checking specific wastes and Ordinance violations.

The Bureau of Engineering prepared standard plans for a combination sandbox, grease trap and clarifier for pretreatment of certain industrial wastes.

Testing of prototype garbage grinders for conformance with Ordinance requirements was continued at the Richmond-Sunset plant.

RESULTS OF OPERATION

Bay and ocean waters in the vicinity of the treatment plant outfalls and at nearby beaches remained in excellent condition during the fiscal year. Waters are safe for bathing along the ocean beach and nearby north shore beaches, and at Aquatic Park at all times except when storm overflow occurs during the winter season. Bay waters in the vicinity of Islais Creek continued to meet State Regional Water Pollution Control Board requirements.

COST OF OPERATION

Total expenditure for the fiscal year was $819,180. The Cost was distributed as follows:

Personal Services	$535,492
Heat, Light and Power	116,636
Contractual Services	43,125
Materials and Supplies	121,583
Equipment	2,344

Based on a connected population of 725,000 the cost of operation was approximately $1.12 per capita.

The following improvement contracts were awarded during the fiscal year:

NORTH POINT PLANT

The emergency lighting system operated by battery was extended to include the lower floor of the Pre-Treatment Building.

RICHMOND-SUNSET

Manholes were cut in the slab covering the influent channels to provide access for cleaning equipment. The manually cleaned coarse bar racks were removed and the openings covered over with aluminum plates. A curbing 18" high was constructed around the two mechanically cleaned bar screens to prevent flooding in the event of failure of the mechanism. The secondary digester gas holder cover was sandblasted and painted.

SOUTHEAST PLANT

Two low pressure steam boilers were replaced by two high pressure boilers in order that steam might be available for emergency use in the event of fire or explosion in the sludge drying system. Steam is also provided for the operation of the asphalt plant which is adjacent to the dryer building.

The ceramic hangers on which the arches in the furnace are suspended, were replaced by cast iron hangers. The mechanical bar screen dead plates were replaced.

(For details of these contracts see Appendix I.)

MARIPOSA PUMPING STATION

ELUTRIATION TANKS AT SOUTHEAST SEWAGE TREATMENT PLANT
Undigested Paunch Manure, Grease and Hair from Slaughter Houses, Meat Packing Plants, Rendering Plants, and Tanneries
November 14, 1955

HUNTERS POINT PUMPING STATION

Safety Dead Front Switch Board

MAIN SEWER BREAK

Castro between Army and 26th Streets

BUREAU OF STREET CLEANING
S.J. Sullivan, Superintendent

FUNCTIONS AND OPERATIONS

The Bureau of Street Cleaning has the responsibility of keeping the 1635 curb-miles of streets in San Francisco free from litter and debris. In addition to this, other miscellaneous work which the Bureau is called upon to perform includes tunnel cleaning; removal of weeds from boulevards, easements and vacant City-owned lots; clean-up of debris after vehicular collisions; clean-up of truck spillages, clean City-owned monuments; wash 87 curb-miles of center islands; and clean-up after all parades or civic celebrations.

There are four methods or a combination of these, which are used in normal operations. These are:

Method 1 - Street sweeping of 550 curb-miles of streets in shopping districts or heavily traveled streets by 133 Blockmen. A Blockman is the worker seen with a broom, scoop and shovel, who works in an assigned section of the City with a route of from one-half to four curb-miles in length. The assigned route, depending upon the area, is serviced weekly, daily or several times daily.

Method 2 - Gang-sweeping crews clean 1100 curb-miles of streets in 10 districts of the City - a district including from 55 to 278 curb-miles of assigned streets. Each crew consists of 1 labor sub-foreman, 1 truck driver, and from 6 to 8 men. The time necessary to cover a district varies from 5 days to 25 days.

Method 3 - Motor sweepers traveled approximately 33,000 curb-miles during the past year in assigned street areas and in such additional locations as the San Francisco City College campus, Youth Guidance Center, Golden Gate Bridge and other paved areas within the grounds of City-owned facilities. At present there are 10 motor sweepers in daily service and the lack of a replacement unit during normal maintenance or because of mechanical breakdown results in a backlog of unswept streets. A request for an additional sweeper to fill this need as well as to give better service in districts now felt to lack such service, will be requested in the next budget.

Method 4 - By the use of motor flushers, jets of water, under pressure, force litter and large pieces of debris from under parked vehicles to the curb where it can be removed by one of the other three methods. The 8 flushers in use have assigned routes which are serviced on schedules ranging from daily to weekly depending on their need. In most cases the use of these flushers has been over extended to the detriment of the assigned area. In addition to the mentioned assignments, a flusher is used once a week to clean the Broadway Tunnel tile. Others are used to help clean up after vehicular collisions and truck spillage and to wash 87 miles of center island curbs and clean city-owned monuments. The flushers are on constant alert for use in natural or man-made disaster as auxiliary fire equipment or to transport potable water.

In conjunction with the four methods outlined above, there are 10 Litter Control crews each consisting of a truck driver and 2 men who patrol assigned areas of the city which are known to be the source of litter pockets created by the ever-present westerly winds.

Three Utility Truck crews are used daily in such miscellaneous jobs as assisting clean-up with the gang crews, weeding boulevard planted strips, clean-up after wrecks and truck spillages, clean-up of the Produce Market area and emergency clean-up work requested by the Police or Fire Department.

PREVENTIVE STREET CLEANING

The "Committee to Keep San Francisco Streets Clean", which is sponsored and supported by the San Francisco Chamber of Commerce under the Chairmanship of Leonard Mosias, has made a good start in a campaign to make the citizens and merchants take an active part in keeping the City clean.

Among the civic organizations which have joined the Committee and are taking an active part in this campaign are: Boy Scouts, Girl Scouts, Camp Fire Girls, Parent-Teacher Associations, and the California Spring Blossom and Wild Flower Association.

One of the City-wide events sponsored by this Committee in May 1955 was a monthly competition between business districts for a trophy presented to the district showing the greatest improvement in cleanliness of sidewalks and streets. A trophy is also presented to the school with the cleanest yard and grounds in the same competing district.

Maintenance and Operation

The San Francisco School Department has continued its program of teaching classes from kindergarten through the high school classes and into adult classes the need and the rewards in curtailing the activities of Litterbugs.

Other volunteers in small groups patrolled a section of the downtown business district asking the pedestrians and merchants to stop littering the sidewalks with paper, wrappings and cartons.

Efforts are continuing in the campaign against the organizations and individuals who illegally tack or paste election posters on utility poles, fences and abandoned buildings. Bureau personnel are directed to remove these signs as they appear, which results in the necessity of neglecting other work and the added cost to the taxpayer of disposal of this material.

The number of drive-ins, burgie stands and the like is increasing yearly. Street and sidewalk areas adjacent to these places of business are a constant source of irritation to neighbors and passers-by because of the unsightly litter. The owners of most of these establishments have cooperated to the extent of furnishing disposal containers, but too many customers disregard them and drop their napkins and food containers as they are finished with them. The worst area in this respect is along the Great Highway at Ocean Beach.

Personnel

The supervisory staff of Superintendent and four District Directors controls the operation of this Bureau and its 329 employees. The District Directors are: L.V. Easterday, T.F. Brown, P.A. Peterson and V.E. Nigro. District Director A.F. Schuler has been on sick leave for the past year. Other classifications are:

1	Clerk-Stenographer
1	Gardener
1	Hired Truck and Driver
265	Laborers
12	Labor Sub-Foremen
49	Chauffeurs

Maintenance and Operation

For the past several years the Bureau has requested, and has been denied, an increase in supervisory assistance from the service of an Assistant Superintendent. The need for this position and another District Director is urgent if the efficiency of Bureau operation is to be maintained. The additional responsibility of the tree planting and maintenance program starting with the coming fiscal year makes this need even greater.

The second annual retirement banquet in honor of those employees who retired during the previous twelve months was held on May 26, 1955. Those honored were: August Antone, Robert Benson, Emilio Boro, Eugene Fabri, Angelo Negro, Luigi Sangiacomo, Santa Savasta and Earl Scully.

Equipment

There were 62 pieces of equipment in use during the past year by this Bureau.

Dump Trucks	29
Motor Flushers	8
Staff Cars	5
Mechanical Loaders	8
Motor Sweepers	10
Miscellaneous	2

During the past two years requests for sufficient funds to paint the Bureau equipment have been denied. The lack of these funds is quite apparent in the appearance of many pieces of equipment. Not only does the equipment depreciate quicker for lack of paint but the example set by neglected looking trucks carrying the message to all citizens to "Keep Our City Clean" is a poor morale builder.

Tests are now being made in an effort to develop a new street receptacle for litter which will be more attractive to pedestrians as well as lighter and more easily handled by Bureau personnel. Material being considered for its construction includes aluminum and fibre glass.

ONE OF 24 TWO-WAY RADIO EQUIPPED DEPARTMENT VEHICLES

Bureau of Street Cleaning

FRONT END LOADER

Picks up Accumulated Debris Left by Motor Sweepers

Bureau of Street Cleaning

BUREAU OF STREET REPAIR
F.D. Brown, Superintendent

FUNCTIONS

The functions of the Bureau of Street Repair continue to be as set forth in previous reports. The following statements have been taken from the annual report for the year ending June 30, 1954.

"The major part of the activities of the Bureau of Street Repair concern the routine maintenance and repair of the City's streets and appurtenant structures, the maintenance and operation of three lift bridges and the maintenance and operation of a tunnel. Minor work other than routine maintenance and repair is performed by order of the Director of Public Works. A considerable amount of paving is done for other departments.

"Routine work includes the maintenance and repair of streets, gutters, curbs, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences; the maintenance of City dumps; the maintenance and operation of lift bridges and a tunnel.

"Work ordered by the Director includes traffic channelization, the maintenance of planted areas in streets, the construction of minor structures appurtenant to streets, and emergency work for the protection of the City and/or the public.

"Work performed for other departments or bureaus includes the repair of pavement in Municipal Railway track areas, the repaving of trenches opened by the Bureau of Sewer Repair for the installation or repair of side sewers, the repair of state highways within the City, and the repair of pavements in school yards and the yards of other City institutions.

"The City's charter provides that work on any one job shall not exceed a cost of $2,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalks in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

"Activities are further limited by state law governing the expenditures of monies from which the bureau is financed."

More detailed description of certain functions will be found elsewhere in this report and in previous reports as follows:

Municipal Asphalt Plant	This report
Machine Resurfacing	This report
Bridges	Report for Year Ending June 30, 1954
Tunnel Lighting	Report for Year Ending June 30, 1954
Tunnel Cleaning	Report for Year Ending June 30, 1954
Source of Funds	Report for Year Ending June 30, 1953
Tunnel Ventilation	Report for Year Ending June 30, 1953

ORGANIZATION

The employments in the bureau and their grouping into crews was as shown in the tabulation that appears in this report; there was but slight variation during the year. The crews were grouped into three divisions: asphalt, concrete and sealing as described in the tabulation indicated.

The Asphalt Plant was under the supervision of Plant Foreman Charles McFadden.

Toward the latter part of the year Sealing crews were placed under the supervision of Mr. Breslin and Mr. Balk was reassigned as a roving supervisor.

An additional asphalt repair crew was to have been organized when the old asphalt plant was abandoned. Completion of the new plant came so late in the year that, with other problems, the plan was abandoned.

Only three Sealing crews were provided for the past year whereas four had been provided in previous years. The unloading of sand at the old asphalt plant formerly required the major portion of the time of one crew. The latter service will not be necessary at the new plant.

The services of operating engineers are not required at the new asphalt plant. When the old plant was abandoned the two operating engineers were reassigned to vacancies in other bureaus.

During the year ending June 30, 1954, and as stated in the report for that year, recommendation was made that two positions of Labor Foreman be reclassified as Labor Sub-foreman. Reclassification of these two positions became effective September 2, 1954.

During the year the Bureau lost the valued services of the following persons:

Maurice Foley	Deceased
Angelo Tognotti	Retired
Guiseppe Scatena	Retired
Liberato Magni	Retired
Abraham Sargent	Retired

SUPERVISION

The Bureau's supervisory force is not adequate.

Not having an assistant superintendent, or other qualified employment, the preparation of budgets, work programs, reports, specifications, and estimates, the investigation of certain complaints, the study of many job problems, the study of equipment to be procured and a considerable amount of routine office work, including all correspondence, must be done by the superintendent. There is little time for supervision, practically none for the field, and yet there is much desirable and sometimes necessary information that is not available. An Assistant Superintendent is a definite need.

The General Foremen plan and assign the work for the crews under their supervision. Office and travel time, and time spent investigating jobs and complaints, leaves little for actual supervision. Some improvement was made toward the latter part of the year by reassigning the Sealing crews thereby making one general foreman available for full time field supervision. However, with twenty two mobile crews scattered throughout the City, an additional general foreman field supervisor could undoubtedly increase the amount of work performed appreciably.

EQUIPMENT

The bureau's equipment and its normal use is shown with the organization schedule which is a part of this report.

New equipment acquired during the year consisted of a mud-jack and five asphalt kettles and tool heaters.

The mud-jack is a Koehring Model 10 with a mud pump having a displacement of 47 cubic feet per hour at a maximum pressure of 100 p.s.i. The unit is small but effective. Its major use is for filling small voids under pavement slabs and it is occasionally used to raise sunken slabs.

The asphalt kettles have a 25 gallon asphalt kettle over a tool heating compartment 28" wide by 33½" long. A vaporizing coil type oil burner, using kerosene from a 15 gallon fuel tank, heats both kettle and tools. Specially designed baffles and flame spreaders distribute the heat. They are mounted on the "fire truck" beds and replace open wood and coal fires.

Equipment replacements made during the year included one low-bed truck, one 8-10 ton tandem roller, one automobile and two dump trucks with workmen's compartment and space for 75 c.f. compressor.

The dump trucks will normally be assigned to Sealing crews but, being equipped with dump bodies, can also be used by Cleanup crews in emergency. Former trucks did not have dump bodies and were of little use for other than sealing work.

Funds were provided for the purchase of "15 Trench Covers and 36 Trench Jacks" to permit vehicular traffic over open sewer trenches. The jacks and twelve wooden covers were purchased. The major portion of the appropriation, however, was for three prefabricated aluminum alloy sections. A satisfactory metal section has not yet been found.

MUNICIPAL ASPHALT PLANT

A new Municipal Asphalt Plant, located at Jerrold Avenue and Quint Street, was accepted by the City on May 13, 1955. The Bureau of Street Repair had, however, occupied it on May 9 and had previously made test runs on April 26, 27, and 28.

The old Municipal Asphalt Plant, located at Florida Street and Treat Avenue, has been in service since April 1915. It will probably never again be used for the production of asphaltic mixtures but will continue to be used for bunkering sand for the Bureau of Sewer Repair and Sewage Treatment until other arrangements are made.

The new plant was engineered by the Department's Bureau of Engineering and constructed by general contractors Hart and Hynding, Inc.

The rated capacity of 90 tons per hour, at a one minute mixing cycle, is considerably greater than will be required over any extended period. However, with four or five crews each waiting for from 6 to 9 tons and one crew in a position to use approximately 50 tons per hour, the greater capacity will undoubtedly pay off by getting the crews on the job more quickly in the morning and at noon without an undue amount of overtime operation.

Main features of the plant are as follows:

Fuel - Natural gas	Pipe Line Service
Fuel, Standby - Oil - 1 tank	Capacity 6,000 Gals
Asphalt Storage - 3 tanks	Capacity 42,000 Gals
Aggregate Unloading Hopper - Dual Hopper	Capacity 2 Carloads
Cold Aggregate Storage - 5 Elevated Bins	Capacity 1,500 Tons
Rotary Dryer - 84" diameter by 28' long	

Burner rating 300,000 BTU per ton of material processed

Hot Aggregate Storage - 4 Bins	Capacity 20 Tons
Mixer	Rated Capacity 3,000 Pounds
Dust Collector	12 foot diameter cyclone and dual horizontal wet tubes 60" dia. x 15' long

Steam - from Southeast Sewage Treatment Plant by pipe line service

The plant proper, from cold elevator to mixer, and including the dust collecting system, was furnished by the Madsen Iron Works.

Asphalt and aggregates are delivered by rail. Cars are spotted on one or both of the plant's two side tracks and moved to position by a drum and cable type car puller.

Two car shakers, one for each track, are provided to facilitate the unloading of sand.

The lower portion of each unloading hopper is constructed of steel and fitted with a vibratory feeder gate to control the flow of aggregate to the storage elevator via a 36" wide belt. Each gate has a feeding range of 0-200 tons per hour.

All conveyors and elevators have a rated capacity of 150 tons per hour.

The storage elevator has a lift of 55 feet and is composed of 16" x 8" buckets on a 24" wide belt.

A 36" wide belt conveys the aggregate from the elevator to any of the five storage bins. A self propelled belt tripper deflects the aggregate into the desired bin.

Storage bins are constructed of steel and each is fitted with a vibratory feeder gate with a range of 0-100 tons per hour. Each bin is also fitted with a compressed air actuated vibrator.

Aggregates are fed from the storage bins, in as nearly the correct proportion as possible, onto a 24" wide belt and conveyed to the cold elevator which has a lift of 23 feet and consists of 0.23 cubic foot buckets mounted on chains.

Aggregates are conveyed from the cold elevator to the dryer by a steel chute upon which is mounted a pneumatic vibrator.

The dryer is designed to raise the temperature of the aggregate to 400° F. and reduce its moisture content from 5% to less than ½% when operating continuously at the rated output of the plant. During a test made May 19, with only two of the three burners operating, the dryer raised the temperature of the aggregate to 375° F. and reduced its moisture content from 5% to nil at a rate of 123 tons per hour.

The hot elevator has a lift of 33 feet and is similar to the cold elevator.

Aggregates are screened into the four hot storage bins through vibrating screens whose sizes are: 6 mesh, 5/16 inch, 5/8 inch and 1 inch.

Aggregates are weighed into the mixer by means of a 3,400 pound capacity weigh box suspended from a 5,000 pound capacity scale. Asphalt is weighed into the mixer by means of a 500 pound capacity steam jacketed bucket suspended from a 1000 pound capacity scale. Each scale has a 24" diameter indicating dial.

The asphalt is steam heated in the storage tanks, circulated through insulated pipes and drawn off as needed at the mixer.

The dust collecting system is so arranged that dust accumulated in the cyclone can be returned, by screw conveyor, to the hot elevator.

Only minor problems have so far been encountered. They are gradually being corrected.

ASPHALT PRODUCTION

The bureau produced 39,492 tons of asphaltic mixtures during the year; 26,908 tons in the old plant and 12,584 tons in the new plant. This was slightly more than for prior years, 37,815 in 1953-1954 and 37,039 in 1952-1953, but was considerably less than the 50,000 tons anticipated.

There were two reasons why the tonnage produced was less than the tonnage anticipated.

1. It was quite certain that cheaper and more satisfactory mixtures could be produced in the new plant. As much work as possible was deferred until the new plant was put into operation. The latter came too late in the year to permit completion of the proposed program.

2. Mixtures produced during the past several years had not been entirely satisfactory; a considerable amount of ravelling had been experienced. It was thought advisable to also defer as much work as possible until this trouble was corrected.

The combination of aggregates that could be used in the old plant was extremely limited. Having produced satisfactory mixtures with them, however, it was concluded that the type of asphalt being used (85-100 penetration) was at fault. In March 1955, the use of "50-60 penetration" asphalt was tried. Results were encouraging and the use of "85-100 penetration" asphalt was discontinued.

Bunkering and screening facilities at the new plant permit a wide range of combinations of aggregates. Mixtures now being produced are quite satisfactory.

WORK PERFORMED

Work performed on Major and Secondary streets during 1954-1955 included the major items and quantities listed below:

Machine resurfacing	3,501,900	sq.ft.
Hand resurfacing	275,200	sq.ft.
Repairs, hot asphaltic mixtures	1,390,300	sq.ft.
Repairs, emulsified asphalt armor coat	65,700	sq.ft.
Concrete pavement repairs	5,800	sq.ft.
Trenches repaved	44,200	sq.ft.
Concrete curb repaired or replaced	6,900	lin.ft.
Concrete curb reset	12,900	lin.ft.
Granite curb reset	10,450	lin.ft.
Granite curb replaced	2,000	lin.ft.
Concrete sidewalk	52,900	sq.ft.
Cracks sealed	1,592,500	lin.ft.
Traffic stripes removed	27,100	lin.ft.
Castings reset to grade	470	each

Work performed for other bureaus and departments included the following major items and quantities:

State Highways, asphalt pavement	33,500 sq.ft.
Municipal Railway, paving	67,300 sq.ft.
School Yards, asphalt pavement	29,800 sq.ft.
Sewer Repair, sidesewer trench paving	21,600 sq.ft.

UNIT COSTS

Some of the more important unit costs, with comparable costs for 1953-1954, are as follow:

	1954-1955	1953-1954
Machine Resurfacing		
Cost per square foot	$ 0.048	$ 0.0554
Cost per ton	$ 7.08	$ 8.07
Square feet per ton	146.8	145.66

Comparison between work performed in "Old Plant" and "New Plant" operation during 1954-55 is as follows:

	Old Plant	New Plant
Cost per square foot	$ 0.0508	$ 0.045
Cost per ton	$ 7.45	$ 6.61
Square feet per ton	146.84	146.86

	1954-1955	1953-1954
Hand Resurfacing		
Cost per square foot	$ 0.1055	$ 0.0906
Cost per ton	$13.24	$14.57
Square feet per ton	125.4	124.4
Asphalt Repairs		
Cost per square foot	$ 0.2384	$ 0.2090
Cost per ton	$30.86	$29.56
Square feet per ton	129.4	141.4
Miscellaneous		
Concrete pavement, per square foot	$ 1.41	
Curb work, per linear foot	$ 2.56	$ 2.40
Curb dressing, per linear foot	$ 2.96	$ 2.31
Concrete sidewalk, per square foot	$ 1.00	$ .96
Reset castings, each	$69.75	$60.83
Sidesewer trench paving, per sq.ft.	$ 0.82	$ 0.57
Remove traffic strips, per lin.ft.	$ 0.17	-

It will be noted that the cost of asphalt resurfacing was appreciably lower than for the previous year. The lower costs reflect better scheduling and, particularly, the introduction of the new asphalt plant.

The increase in the cost of Asphalt Repairs was caused by the removal of a greater amount of broken pavement than has been removed in previous years. The cost of removing 364,547 square feet of broken pavement was $84,520, equivalent to $0.06 per square foot or $7.86 per ton of the costs shown.

The increase in the cost of sidesewer paving was caused by a change in procedure. In previous years the full depth of trench was filled in one operation. The practice of placing a surface course a few days after the construction of the base was begun in December, 1954. The change is designed to minimize the necessity to repave settled trench pavement.

MACHINE RESURFACING

At the beginning of the year it was anticipated that the bureau would resurface approximately 5¼ million square feet of street surface. However, because of reasons previously explained, the proposed program was not completed. The total area resurfaced during the year was 3,501,900 sq. ft.

The 1954-1955 Resurfacing Program was the first such program based on a systematic survey of any kind. The survey was far from complete but assured that each job was entirely warranted. The survey was continued during the year to the point that those streets most badly in need can now be given preferance even though others are warranted.

In determining whether or not a pavement should be resurfaced consideration is given to surface evenness, erosion, cracks and patches; general appearance and, particularly, the volume of traffic carried are considered in "borderline" cases. The rating of the various conditions is a matter of personal judgment and is not determined by use of mechanical devices.

Once a resurfacing program is adopted it is pursued as systematically as possible. On rare occasion an urgent job may require a cross town move.

Most streets are in such condition that the resurfacing can be performed without any preparatory work. Where necessary, however, high spots are cut out, badly broken pavement is removed and replaced, curled edges at cracks are removed and cracks are sealed before the resurfacing crew arrives at the site. Low spots, unless extensive, are usually filled by the resurfacing crew.

The desired thickness of the resurfacing course is one inch. One ton of material spread one inch thick will cover an area of approximately 170 square feet. With allowance for the filling of depressions an average of 140 to 150 square feet per ton or an average thickness of 1-1/8 to 1-1/4 inches, is acceptable. The average for the year was 146.8 square feet per ton, or a thickness of slightly more than 1-1/8 inches.

Gutters and parking lanes are usually in better condition than the main travelled way of a street and are not resurfaced unless in poor condition. The practice permits the resurfacing of a greater amount of travelled way and eliminates the filling of gutters. Curb height is quite important, particularly for holding parked automobiles on steep hills, and the removal of old surface before applying new is very costly. Where resurfacing does not extend to the curb it is "feather edged" at a uniform distance from the curb; that distance may vary from a few inches to about seven feet.

The composition of the Machine Resurfacing crew and the assignments of the individual members is as follows:

Chauffeurs	3 to 6	Hauling materials
Engineers	1	Operating paving machine
	2	Operating rollers
Asphalt Workers	1	Tending screed, dumping trucks
	2	Shovelling
	1	Applying tack coat
	1	Tending barricades
Asphalt Finishers	2	Raking
	1	Ironing
	1	Tending traffic
Foreman	1	Directing crew and operations

A 1½ ton flat bed truck with workmen's compartment is hired, with driver, to transport crew and tools. This truck also tends the distributor tank while on the job to distribute emulsified asphalt tack coat.

It will be noted that the crew is somewhat larger than the normal crew used by private contractors; reasons are as follows:

1. All employments are civil service and there is no provision for the replacement of absentees. The crew is often short one or two men.

2. Jobs are small and from one to four moves are made daily. One or more men must be sent ahead to the next location to set out barricades and assure that the street will be clear so that work can commence as soon as the crew arrives.

3. "Feather-edging" creates a considerable amount of loose rock that must be cleaned up. All hands assist in cleaning up as time permits.

The resurfacing mixture, locally referred to as "Spreader Mix" is composed of 5½% of 50-60 penetration paving grade asphalt and sand and gravel graded to a maximum size of one inch. The nominal grading of the coarsest gravel used is ½"-¾"; the amount in the mixture exceeding ¾" in size probably never exceeds 2%.

BRIDGES

The operation of the City's three lift bridges continued to be substantially as described in the report for the year ending June 30, 1954.

A study of openings showed that the Fourth Street Bridge had been opened during the hours between 8:00 p.m. and 4:00 a.m. an average of only slightly more than once per month during a period of nearly three years. Proper arrangements were made and shipping interests were notified by the Coast Guard that beginning at 8:00 p.m. July 1, 1954, this bridge would be opened only in cases of emergency between the hours of 8:00 p.m. and 4:00 a.m.

The change in personnel assignment necessitated by the above described closing was easily accomplished. One watchman from the Fourth Street Bridge and one from the Third Street Bridge were reassigned to vacancies in other bureaus; one operating engineer was reassigned from the Fourth Street Bridge to the Third Street Bridge.

Two operating engineers are now on duty at the Third Street

Bridge between the hours of 8:00 p.m. and 4:00 a.m. Normally one acts as watchman but in cases of emergency can be spared to operate the Fourth Street Bridge.

The saving effected by the subject closing amounts to approximately $14,500 per year.

The bridge openings during the year were as follows: Islais Creek - 1,318; Third Street - 950; and Fourth Street - 372.

TUNNEL

The maintenance and operation of the Broadway Tunnel continued to be as described in previous reports.

It has been found, however, that the maintenance of the large planted areas over the ventilation buildings requires more time than can be spared by the operating personnel. Rather than employ a gardener, it was thought advisable to pave portions of these areas. An appropriation was requested for that purpose and will be provided in the 1955-1956 budget.

Operation of the ventilating system continued to be as described in the report for the year ending June 30, 1954. The operating time of the blowers, with 1953-1954 operating times shown in parentheses, was as follows:

	SLOW			FAST		
	Hours		Percent	Hours		Percent
No. 1 North Bore, Westbound traffic	196.9	(251.2)	2.25	6.5	(9.3)	.07
No. 2 North Bore, Westbound traffic	189.9	(256.7)	2.17	8.3	(8.5)	.10
TOTAL	386.8	(507.9)	4.42	14.8	(17.8)	.17
No. 3 South Bore, Eastbound traffic	18.6	(24.8)	.21	1.6	(1.2)	.17
No. 4 South Bore, Eastbound traffic	18.2	(22.3)	.21	1.3	(1.3)	.01
TOTAL	36.8	(47.1)	.42	2.9	(2.5)	.03

Relamping did not present as great a problem as was anticipated. Only 883 of the approximately 1425 tunnel lamps were replaced during the year. As of June 30, 1955 there were approximately 200 of the original lamps, installed sometime prior to December 1952, still in service.

Traffic counts made, since opening the tunnel to traffic, were as follows:

	Eastbound	Westbound
Wednesday, February 11, 1953	8,668	8,760
Monday, August 17, 1953	9,361	8,878
Wednesday, March 16, 1955	10,607	9,795

BUREAU OF STREET REPAIR

Personnel and Equipment omposition of Crews

1955 - 1956

CREW	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIRS	ASPHALT REPAIRS	ASPHALT REPAIRS	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	MASONRY REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP	CLEANUP	MATERIAL DELIVERY	SEALING	SEALING	SEALING	TRACTOR WORK	YARDS	MISCL ASSIGNMENTS	PART TIME - STANDBY	UNFILLED POSITIONS	ASPHALT PLANT	BRIDGES	TUNNEL	TOTALS
PERMANENT EMPLOYMENTS																																
Supt. of St. Repair																																1
Gen. Fore. of St. Rep.																																3
Watchmen																									1			2		5	2	10
Operating Engineer																													2	13	2	17
PER DIEM EMPLOYMENTS																																
Cement Fin. Helper												1																				1
Cement Finisher												2	3	2																		7
Laborer								4	4	1	1					2		4	4		2	2	2		2	2		2	1			33
Pneumatic Tool Opr.						2	2										2				1	1	1									9
Sprayman																					1	1	1									3
Labor Foreman																		1														1
Labor Sub-foreman									1										1													2
Chauffeur	5	2	1	1	1	1	1	1	1	2							1	1	1	1	1	1	1	1		1						25
Engineer, H&P Engines	3	1																														4
Dryer-Mixerman																													3			3
Foreman-Asphalt Plt.																													1			1
Paver											1																					1
Granite Cutter															3																	3
Curbsetter																1																1
Asphalt Worker	4	2	3	3	2																								2			16
Potman	1	1	1	1	1																							1				6
Asphalt Finisher	4	3	2	2	2																							1	1			15
Subforeman Finisher	1	1	1	1	1			1													1	1	1									9

The Machine Resurfacing Crew was used for making major street repairs during a considerable part of the year. During such time two engineers were released to work with other crews. The standby truck mounted compressor was put into service and the crew performed its own compressor work and cleanup.

During the time that the Machine Resurfacing Crew worked as a repair crew two engineers were assigned to Street Repair Crews thus providing two of them with power rolling where Hand Rolling would otherwise be used.

"TOTALS" show the number of employments provided by the annual salary ordinance.

Clerical service was provided by the Bureau of Accounts. The part time services of a Chief Engineer and a relief Watchman were furnished by the Bureau of Building Repair. The Bureaus rendering the service were appropriately reimbursed.

Continued

CREW	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIRS	ASPHALT REPAIRS	ASPHALT REPAIRS	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	MASONRY REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP	CLEANUP	MATERIAL DELIVERY	SEALING	SEALING	SEALING	TRACTOR WORK	YARDS	MISCL. ASSIGNMENTS	PART TIME - STANDBY	UNFILLED POSITIONS	ASPHALT PLANT	BRIDGES	TUNNEL	TOTALS
EQUIPMENT																																
Passenger Cars																																6
Dump Trucks	5	2	1	1	1					2										1							1		1			15
Dump Trks., Wkm's. Comp.								1	1									1	1													4
Trucks-Sealing Units																					1	1	1				1					4
Truck-Low Bed																											1					1
Trk. Mounted Compres.							1	1									1										1					4
Trl. Mounted Compres.																											1					1
Skid Mounted Compres.																											1					1
Paving Machine	1																															1
Power Rollers	2	1																									1					4
Tractor-Loader										1																						1
Tractor & Bulldozer																								1								1
Pickup Trucks	1										1	1	1	1		1																6
Spray Machine	1																				1	1	1				2					6
Power Grader																											1					1
Tractor Crane																											1					1
Sand Loader																											1					1
Tractor Surface Htr.																											1					1
Concrete Saw											1																					1
Tip Trailer																										1						1
Asphalt Kettles & Tool Heaters		1	1	1	1																						2					6
Mud-jack																											1					1
HIRED EQUIPMENT																																
Trucks	1	1	1	1	1															1						1						7

Resurfacing crews, asphalt repair crews, two compressor crews, a utility crew, a power loaded cleanup crew, tractor crew and one hand loaded cleanup crew were under the general supervision of General Foreman, J.P. Barry.

The masonry repair crew, concrete repair crews, curb dressing crew, curb resetting crew, one compressor crew, two cleanup crews and a materials delivery truck were under the general supervision of General Foreman, Thomas Breslin.

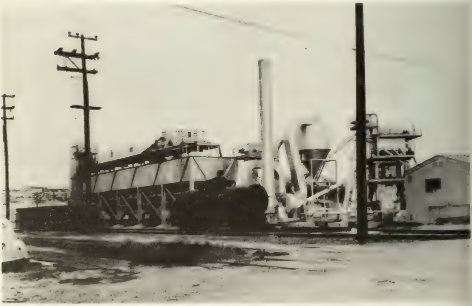
The sealing crews were under the general supervision of General Foreman W.S. Balk who also had other duties.

The bridges and tunnel were under the general supervision of Chief Operating Engineer, John Donaldson.

MACHINE RESURFACING IN PROGRESS

Fulton Street, between Larkin and Polk Streets

City Hall in Background



NEW MUNICIPAL ASPHALT PLANT

Bureau of Street Repair

ADMINISTRATIVE BUREAUS

R. Brooks Larter
Assistant Director, Administrative

The Administrative bureaus of the Department are responsible for the functions of fiscal control, preparation of the annual budget, processing of building permits, accounts, reports, personnel and City Hall telephone service.

These Bureaus were under the direction of Frank W. McKenzie, former Assistant Director for many years until his retirement in September 1954 after 42 years of City service.

The primary duties of these bureaus are to provide the administrative services to the operating bureaus which are necessary in order to accomplish the various job assignments. This includes such tasks as processing of personnel, presentation of operating reports, presentation of requests for funds, processing of purchase orders and preparation of payrolls.

A detailed statement for each Bureau follows:

BUREAU OF ACCOUNTS

J.J. McCloskey, Chief Clerk

The principal activity of the Bureau of Accounts is the control of the budgetary and financial transactions of the Department. Documents dealing with the disbursement of funds originates in the bureau and are channeled through required procedures until final liquidation.

The Bureau has a central office at the City Hall which handles the accounts for construction work being performed by the Department and also the operating accounts for the General Office, Bureau of Engineering, Bureau of Architecture, Bureau of Building Inspection and Central Permit Bureau.

The Bureau has a larger office located at the Department of Public Works Maintenance Yard, 2323 Army Street. This yard office handles the operating accounts for the following Maintenance Repair Bureaus: Bureau of Building Repair, Bureau of Sewer Repair, Sewage Treatment Plants and Sewage Pumping Stations, Bureau of Street Cleaning, Bureau of Street Repair, including bridges and tunnels.

PERSONNEL

The permanent staff of 35 employees consists of:

1	Chief Clerk in charge of the Bureau
2	Head Clerks
5	Bookkeepers
3	Senior Clerks
14	General Clerks
5	General Clerk-Stenographers
3	General Clerk-Typists
2	Telephone Operators

In addition to the above employees, a Storekeeper is assigned by the Purchaser of Supplies to perform duties in connection with the operation of the sub-storeroom and materials yard.

One General Clerk is assigned to act in the capacity of Control Station Operator of the Department's mobile radio system which began operation on March 1, 1954. The radio system includes 24 mobile radios in passenger vehicles and trucks of the Department in addition to the Control Station. During the fiscal year 1954-55, a total of 10,334 calls was handled for an average of 41 calls per day. In addition to the radio activities, this clerk handled routine clerical duties for the Bureau of Street Cleaning.

Budget expenditures for operation of the Bureau of Accounts for the fiscal year 1954-55 were as follows:

Permanent Salaries	$101,006.00
Temporary Salaries	143.00
Contractual Services	626.00
Materials and Supplies	778.00
Services of other departments	3,800.00
TOTAL	$106,353.00

FUNCTIONS AND ORGANIZATION

The operating functions of the Bureau embrace control of payroll procedure, personnel records and field time-keeping; purchase order requisitions; sub-storeroom and inventories; automotive expenditures and gasoline and tire records; work order job costs and invoicing; side sewer job and refunds accounts; State gas tax subventions; the cash revolving fund for the Department; the stores revolving fund; budget preparation and control; operation of the Yard telephone exchange; and the supplying of clerical service to all of the operating bureaus.

Included in the general functions of the Bureau are three well defined sub-divisions: Payrolls and Personnel with two Senior Clerks and five assistants; Purchasing and Stores with a Head Clerk and two assistants; Gas Tax subventions and Bond Funds with a Head Clerk and three assistants.

Three field timekeepers check outside operations for payroll verification and also act as paymasters on semi-monthly pay days, delivering pay warrants to employees on the job.

OPERATIONS

Reports to the Director on operations of the Building Repair, Sewer Repair, Street Repair and Street Cleaning Bureaus are prepared monthly by the Bureau of Accounts from the records maintained in the Bureau.

Job costs pertaining to damages to City property under the jurisdiction of the Department are compiled and forwarded to responsible parties for collection. These costs amounted to $7,113.82 for the fiscal year and embraced 154 cases, covering damages to bridges, automotive equipment, street structures, traffic signals, street signs, traffic devices and prisoner damage to police stations. The Bureau handled the fiscal processing of contracts under bond issues for Street Improvements, Sewers, Sewage Treatment Plants, Schools, and Fire Houses under programs which are expected to continue into subsequent years.

In the supplying of materials for the varied activities of the Department, a sub-storeroom and a material yard are conducted, through which 25,711 transactions were handled involving the delivery of 76,752 items to jobs. Outside purchases from vendors brought about the issuance of 6,746 requisitions involving 15,324 items and 5,784 delivery orders involving 17,322 items and 15,511 storeroom tags involving the delivery of 46,533 items and 127 requisitions on storekeeper involving 905 items.

The Stores Revolving Fund under the control of the Bureau is designed to permit the purchase in advance of constantly used materials. Plumbing supplies, electrical items, paints, hardware, lumber, glass, tools, sewer pipe, brick, cement, castings and miscellaneous needs which can be foreseen, are carried in Stores and charged out to the various jobs as needed. Controls have been established which facilitate monthly reimbursements for goods withdrawn, and stores records are maintained on a perpetual inventory basis subject to annual physical check.

The Department Cash Revolving Fund of $1,500.00 is used by the Bureau for payment of small bills and transportation charges, and enables workmen on field work to make cash purchases at neighborhood stores thus avoiding trips to downtown establishments. All transactions are conducted under controls set up by Ordinance of the Board of Supervisors.

Detailed records of all expenditures are maintained, particularly on jobs performed under work order procedure. In these, the Charter requires that all elements of indirect and supervisory costs be considered and made part of the final job cost. To accomplish this, indirect labor is pro-rated monthly on an exact percentage basis, as are overhead charges for accident compensation, sick leave, vacation, retirement, equipment replacement and miscellaneous. These items of overhead are accumulated in reserves to meet the requirements designated. Charges for small tools and shop supplies used in work order operations are made against the miscellaneous reserve.

SUMMARY OF TRANSACTIONS

Budgeted Funds, Subject to Control and Appropriated to:

	BUDGET		EXPENDITURES	
BUREAU	1953-1954	1954-1955	1953-1954	1954-1955
General Fund:				
General Office	$ 123,114	$1,038,653	*$ 139,870	$ 557,411
Architecture	231,856	41,791	99,038	57,267
Bldg. Inspection	345,697	355,953	343,935	351,992
Engineering	632,803	396,891	447,958	399,303
Central Permit	44,276	44,634	43,960	39,627
Accounts	105,144	110,962	102,650	106,353
Building Repair	2,036,588	1,642,272	1,483,932	1,584,247
Street Cleaning	1,655,792	1,701,479	1,637,117	1,635,016
Sewer Repair	770,463	816,561	759,283	** 809,796
Sewage Treatment	836,478	825,629	824,436	819,180
Sewage Pump Stations	81,303	81,439	79,686	81,268
Special Road Improvement Fund:				
Street Repair	1,172,563	1,265,597	1,160,484	1,193,170
Bridges and Tunnels	194,448	161,463	180,900	149,765
Traffic Engineering Division	-	612,459	-	529,589
Engineering - Administration	139,400	45,943	132,845	41,139
Maintenance - Reconstruction	1,053,364	655,113	826,454	653,993
Construction	1,090,500	1,180,000	# 1,406,863	708,991
Special Gas Tax Street Improvement Fund:				
Maintenance	119,500	149,500	96,716	143,047
Construction	4,302,000	1,882,000	2,033,749	645,456
TOTALS	$14,935,289	$13,008,339	$11,799,876	$10,506,610

* Includes the sum of $19,571 for Capital Improvements budgeted in prior year.

** Includes the sum of $119,755 expended against side sewer deposits for installation and repair covering 592 permit deposits for 700 house connections.

# Includes the sum of $1,201,874 for Construction budgeted in prior years.

BUREAU OF ACCOUNTS

Interdepartmental service, under work order procedure for:

Schools	$ 815,375.42
Health	2,214.59
Recreation - Park	9,303.34
Library	1,640.66
Public Buildings Improvements	155,319.26
Gas Tax Accounts	1,444,931.63
Engineering	5,358.62
Public Utilities	81,733.69
General Fund	190,522.41
Fire Department	5,430.15
Special Inspection	10,623.80
State Highway Cleaning	53,829.86
Paving Side Sewers	31,405.12
State Highway Repairs	15,897.44
Legion of Honor	8,074.24
Publicity and Advertising	3,387.92
War Memorial	5,221.29
Sewage Treatment Plant Bonds	126,680.66
Sewer Bonds	945,304.59
Street Bonds	645,714.34
Juvenile Court Bonds	197.19
School Bonds	135,385.17
Fire House Bonds	100,576.63
Laguna Honda Home Bonds	3,825.98
Miscellaneous	22,120.14
TOTAL INTERDEPARTMENT SERVICE	$4,820,074.14

CENTRAL PERMIT BUREAU

Sidney Franklin, Acting Supervisor

FUNCTIONS

The Central Permit Bureau is the permit issuing unit of the Department of Public Works. Its principal duties consist of receiving and recording applications for various types of permits, processing them in accordance with relevant laws and ordinances, issuing the necessary permits based thereon, and collecting the required statutory fees. It is in effect, a clerical and record-keeping bureau for the bureaus and departments concerned with enforcing building and other codes as they affect the health and safety of the citizens of San Francisco.

This bureau was created in 1932, with the advent of the new City Charter, to satisfy a long felt need for one central office to serve the public in all permit matters. It is the coordinating body in the processing of applications for permits, and is responsible for their prompt transmission and expeditious approval by the departments and bureaus interested. The bureau issues between 40,000 and 50,000 permits a year, the applications for which must be properly approved by from two to five agencies.

The Central Permit Bureau is the custodian of all public records pertaining to permits issued by the Department of Public Works.

Another important function of this bureau is the issuing of house numbers. All new buildings receive house numbers when the building permits are issued, and houses are renumbered whenever necessary. Accurate official records are kept of all the house numbers in the City, which are of invaluable aid to banks, insurance companies, real estate offices and the general public. These records are constantly used when official information of this sort is needed.

It is also the duty of this bureau to render bills for all claims for damages to property under the jurisdiction of the Department of Public Works, and for excess costs in the installations of side sewers. The moneys collected from these bills, as well as all other receipts of the department, are cleared through the Central Permit Bureau for deposit in the proper funds in the City Treasury.

PERSONNEL

This bureau was shocked and saddened by the death, on March 28th, 1955, of Sylvan J. Rosenblum, Supervisor of the bureau. Mr. Rosenblum was the head of the bureau since its inception and was responsible for many innovations which added to the efficiency of the bureau. His passing was a real loss to the bureau and to the City government. Mr. Sidney Franklin was appointed Acting Supervisor of the bureau on May 9th, 1955, and was serving in that capacity at the end of the fiscal year.

The personnel of the Central Permit Bureau, as of June 30th, 1955, was as follows:

1 Supervisor
1 Cashier
2 Senior Clerks
1 General Clerk-Stenographer
5 General Clerk-Typists

TABLE I

PERMITS ISSUED AND FEES RECEIVED

	1954-1955		1953-1954	
	PERMITS	FEES	PERMITS	FEES
Buildings	8,771	$213,258	8,464	$184,161
Billboards	190	726	274	1,040
Demolitions	172	1,395	142	1,530
Boiler Installations	133	680	211	710
Boiler Inspections	1,065	5,176	1,531	6,637
Street Space*	953	32,549	900	28,807
House Numbers	918	3,480	822	2,963
House Moving	6	120	17	340
Excavations (Pub. Util., etc.) *	9,764	17,078	8,787	17,324
Excavations (Excl. of Util.)	874	3,025	761	2,604
Flue Registrations	29	580	34	680
Flues - New Buildings	36	18	28	14
Flues - Old Buildings	87	174	126	252
Flues - New Buildings, Coupons	60	750	41	513
Flues - Old Buildings, Coupons	23	460	26	520
Posting Notices	839	2,198	745	2,003
Flower Markets	44	1,500	44	1,536
Advertising	16	2,182	23	2,979
Surveys	30	9,210	24	6,775
Engineering Inspections	59	19,530	47	12,815
Electrical Inspections	17,567	91,943	17,140	95,088
Sign Inspections	Included in Elec. Insp.	8,913	Included in Elec. Insp.	8,396
Electrical Sales	2,120	21,200	908	9,476
Sidewalks	10	-	15	-
TOTAL - TABLE I	43,766	$436,145	41,110	$387,163
TOTAL - TABLES II and III	2,503	5,442,202	2,698	6,585,549
GRAND TOTAL - PERMITS AND REVENUE	46,269	$5,878,347	43,808	$6,972,712

*Permits and fees only.

See Table II for refundable deposits.

TABLE II

MISCELLANEOUS DEPOSITS

	1954 - 1955		1953 - 1954	
REFUNDABLE DEPOSITS	PERMITS	DEPOSITS	PERMITS	DEPOSITS
Street Space	*	$ 21,600	*	$ 18,930
Subsidewalk	1	3,300	-	-
Deposit on Plans	1,597	55,155	1,873	58,645
Excavations	*	2,167	*	1,203
TOTAL	1,598	$ 82,222	1,873	$ 78,778

*Street Space and Excavations require both a fee and a deposit. Amounts shown are deposits only.

PARTIALLY REFUNDABLE DEPOSITS				
Side Sewers	649	$172,680	579	$138,575
Excess Costs - Side Sewers	162	6,158	167	4,843
TOTAL RECEIVED	811	$178,838	746	$143,418
AMOUNT REFUNDED **		$ 36,817		$ 34,246
Net Revenue applied or to be applied to Installation Costs		$142,021		$109,172

**Includes total and partial refunds.

AGENCY DEPOSITS				
Street Improvement Bonds	94	$ 8,309	79	$ 8,412
TOTAL	2,503	$269,369	2,698	$230,608

TABLE III

MISCELLANEOUS REVENUE

	1954-1955 PERMITS	1954-1955 DEPOSITS	1953-1954 PERMITS	1953-1954 DEPOSITS
General Fund		$ 66,604		$ 57,333
Special Road Improvement Fund		2,566,760		2,601,841
State Highway Trust Fund		387,450		14,798
1948 School Bond Fund		4,660		4,818
Special Gas Tax - Street Improvement Fund		2,147,036		3,673,626
Library Fund		87		-
1952 Fire House Fund		236		-
1947 Street Improvement Bond Fund		-		1,650
San Francisco Unified School District Fund		-		875
		$5,172,833		$6,354,941
TOTAL - TABLES II and III	2,503	$5,442,202	2,698	$6,585,549

TABLE IV

STATEMENT OF CONDITION SPECIAL FUNDS AS OF JUNE 30, 1955

	Balance July 1, 1954	Deposits 1954-1955	Refunds 1954-1955	Balance June 30, 1955
Special Permit Fund (St. Space and Subsidewalk Dep.)	$14,449	$24,900	$17,520	$21,829
Street Improvement Fund (Payments of St. Imp. Bonds)	465.27	-	-	465.27
Excavation Fund	2,201.50	2,167	635.30	3,733.20
Deposits on Plans	5,235	55,155	54,095	6,295

APPENDIX I

BUREAU OF ENGINEERING
CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Way
July 1, 1954 - June 30, 1955

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1954-1955
A	Major Thoroughfares	7	$ 741,899.59	$ 319,301.09
B-1	Streets - Private Contracts	26	411,120.00	212,611.00
B-2	Streets - Assessment Proceedings	18	246,060.34	134,530.67
B-3	Streets - Public Contract City Pay	15	404,758.00	369,651.65
B-4	Streets - Car Track Removal	5	825,017.18	871,863.98
C	Traffic Signals & Channelization	5	314,127.60	312,632.58
D-1	Sewers - Pipe, Vitrified Clay & Concrete	7	243,350.01	440,560.30
D-2	Sewers - Concrete Monolithic	3	1,005,461.90	401,920.34
E	Miscellaneous	32	434,025.06	799,052.79
	TOTALS	118	$4,625,819.68	$3,862,124.40

TABLES

On the following pages appear separate tables of current contracts for each of the types of Construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
Spec. Rd.	Special Road Improvement Fund
Major Sts.	Special Gas Tax Improvement Fund
State Hwy.	State Highway Fund
Assmt.	Assessed to property benefiting under the Street Improvement Ordinance of 1934
Pd. Prop. Owners	Costs borne by Property Owners under private contract
1944 Sewer Bonds	Bond Issue voted by citizens on November 7, 1944 - $12,000,000
1947 St. Imp. Bonds	Bond Issue voted by citizens on November 4, 1947 - $22,850,000
1948 Sewage Tr. Bonds	Bond Issue voted by citizens on June 1, 1948 - $15,000,000
1954 Sewer Bond	Bond Issue voted by Citizens on June 8, 1954 - $12,645,000

CURRENT CONTRACT DATA 1954-1955

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
A - MAJOR THOROUGHFARES					
Twin Peaks Blvd. from 800' N of Portola Drive to Clarendon Ave. (2nd Contract) (Widening, Repaving & Reconstruction) Lowrie Paving Co., Inc.	2-3-54	7-16-54	$ 63,643.25	$ 14,173.25	Spec.Rd.
Geneva Ave. between Mission St. & Prague St. (Reconstruction) Lowrie Paving Co., Inc.	3-24-54	7-26-54	95,379.57	36,219.57	Spec.Rd. Major Sts.
Masonic Ave. from Euclid Ave. to Presidio Ave. (Extension) The Fay Improvement Co.	5-19-54	10-1-54	44,335.98	40,660.98	Spec.Rd.
Lake Merced Blvd. at Font Blvd. & Winston Drive (Channelization) Chas. L. Harney, Inc.	9-15-54	99%	44,359.50	34,000.00	Spec.Rd.
Geneva Ave. Extension from San Jose Ave. to Tara St. (Construction) Chas. L. Harney, Inc.	9-28-54	4-28-55	61,596.39	61,596.39	Major Sts. Spec.Rd.
13th St., Mission St. to South Van Ness Ave. (Widening) Chas. L. Harney, Inc.	10-29-54	3-1-55	82,573.44	82,573.44	Major Sts.
Stanley Drive to Junipero Serra Blvd. (Rt. Turn Connection) Chas. L. Harney, Inc.	2-11-55	5-6-55	18,117.46	18,117.46	Spec.Rd.

Portola Drive from Woodside Ave. to Clipper St. (Improvement) Chas. L. Harney, Inc.	3-2-55	29%	$126,689.80	$ 31,960.00	Spec.Rd. Major Sts. 1944 SewerBd.
Skyline Blvd. from Lake Merced Blvd. to County Line (Widening) Chas. L. Harney, Inc.	6-10-55	0%	348,845.00	0	State Hwy.
18th St. Viaduct, between Iowa St. & Minnesota St. - Replacement of Roadway Deck Walter Lenkeit	6-8-55	0%	59,718.00	0	Spec.Rd.
Total Awarded and Expended During Fiscal Year			$741,899.59	$319,301.09	

CURRENT CONTRACT DATA 1954-1955

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS					
Ordway St. (N½) from Goettingen St. to 35' E	S,C,P	The Fay Impr.Co.	9-25-53	5-24-54	$ 700.00
Goettingen St. from Ordway St. to Ward St.	C,S,P	The Fay Impr.Co.	10-28-53	5-24-54	15,200.00
Midtown Terrace #2 (Contract #2) (Streets Within)	S,C,P	StandardBldg.Co.	11-20-53	9-2-54	51,000.00
Ocean Ave. (N½) - 200' & 400' West San Jose	S	Watkin & Sibbald	12-18-53	6-15-54	1,000.00
*Putnam St. - Portions from Jarboe to Tompkins	C,P	The Fay Impr.Co.	1-6-54	8-17-54	7,300.00
Restani Terrace (Streets Within)	S,C,P	Lowrie Paving Co.	1-20-54	4-15-54	12,300.00
Oxford St. from Burrows St. to Bacon St.	S,C,P	The Fay Impr.Co.	2-10-54	2-11-55	14,400.00
Florida St. from Division St. to 16th St.	C,P	Cahill Bros.,Inc.	6-4-54	10-12-54	22,500.00
Hawes St. (Portions) between Shafter Ave. & Thomas Ave.	C,P	Chas.L.Harney,Inc.	7-14-54	11-29-54	2,300.00
Cambridge St. from Felton St. to Bacon St.	S,C,P	The Fay Impr.Co.	8-4-54	70%	23,200.00
Funston & Santiago Sts.	S	Anderson & Rowe, Inc.	9-15-54	12-13-54	2,100.00
Shoup Ave. - Northerly from Egbert Ave.	S	Anderson & Rowe, Inc.	9-15-54	9-10-54	500.00
York St. (W½) from 22nd St. to 23rd St.	S	Chas.L.Harney,Inc.	9-17-54	10-27-54	150.00

Revere Ave. (N$\frac{1}{2}$) - Westerly from 3rd St.	C, P	Beacon Constr.Co.	9-22-54	9-29-54	$ 1,200.00
Egbert Ave. from Newhall St. to 564' E'ly					
Egbert Ave. from Newhall St. to 287' W'ly	C, P	Lowrie Pav.Co.,Inc.	9-24-54	10-14-54	13,345.00
Talbert St. from Visitacion Ave. to N' Termination	S,C,P	Lowrie Pav.Co.,Inc.	9-24-54	12-23-54	7,600.00
Midtown Terrace Subdivision #3-4 (Streets Within)	S,C,P	Standard Bldg.Co.	10-6-54	28%	135,000.00
Tehama St. Southwest of 2nd St.	S	The Fay Impr. Co.	11-5-54	12-8-54	1,200.00
*Harvard St. (E$\frac{1}{2}$) from Burrows St. to Bacon St.	S,C,P	The Fay Impr. Co.	11-17-54	10%	7,200.00
Geneva Ave. - Carizal St. easterly	S	M.J.Lynch	11-17-54	12-17-54	775.00
Dwight St. from Darthmouth St. to Bowdoin	S,C,P	The Fay Impr.Co.	1-26-55	4-15-55	6,600.00
Illinois St. (W/Side) from 22nd St. to 23rd St.	D	Eaton & Smith	2-4-55	5-3-55	100.00
Scott St. (W/Side) from Sutter St. to Post St.	P	Gene Marchi	2-9-55	3-15-55	2,500.00
Midtown Terrace Subdivision #3 & #4 (Contract #2)	S,C,P	Standard Bldg.Co.	3-18-55	28%	70,000.00
Midtown Terrace Subdivision #3 - Dellbrook Ave.	S,C,P	Standard Bldg.Co.	3-18-55	28%	47,000.00
Colby St. from Olmstead to 250' N	C, P	The Fay Impr.Co.	3-23-55	6-22-55	7,200.00

CURRENT CONTRACT DATA 1954-1955

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS (Continued)					
Bright St. - Stanley Drive and Existing Pavement Stanley St. - Orizaba St. & Bright St. & Intersection	C, P	The Fay Impr.Co.	4-6-55	35%	$ 8,400.00
Wildwood Park (Streets Within) Contract #1	S	Standard Bldg.Co.	4-22-55	7-8-55	7,000.00
Wildwood Park (Streets Within) Contract #2	C, P	Standard Bldg.Co.	5-6-55	7-8-55	10,000.00
Hudson Ave. from 3rd St. to Phelps St.	C,S,P	The Fay Impr. Co.	5-13-55	25%	12,000.00
Ordway St. from Goettingen St. to Somerset St.	C,S,P	The Fay Impr. Co.	5-18-55	33%	8,050.00
Fowler Ave. - Intersection at Portola Drive & Woodside	P	Wm. Horstmeyer	6-8-55	0%	1,000.00
*Bright St. (Portions) between Shields & Garfield	S,C,P	Chas.L.Harney	6-8-55	0%	15,700.00
Mangels Ave. from Baden St. to Hammerton Ave. Mangels Ave. - Intersection • Burnside & Hamerton	G,C,P,S	Lowrie Paving Co.	6-29-55	0%	21,000.00
Total Awarded During Fiscal Year					$411,120.00
Total Value of Work Done During Fiscal Year					$212,611.00

*Remaining Portions improved under Public Contract

P = Paving C = Curbs W = Sidewalks CB = Catchbasins

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREETS - ASSESSMENT PROCEEDINGS					
Goettingen St. Crossings at Ordway St. & Ward St.	S,C,P	The Fay Impr.Co.	9-25-53	5-24-54	$ 8,401.70 (4,900.00)-
Burrows St. from Gambier St. (W/L to Cambridge (E/L)	C, P	The Fay Impr.Co.	10-7-53	7-2-54	21,092.75 (6,400.00)- (10,200.00)-
Moscow St. from Peru St. to Silliman St. Silliman St. from Moscow St. to Madison St. Silliman St. - Intersection Moscow	S,C,P	Eaton & Smith	1-6-54	6-11-54	16,647.00 (12,000.00)-
Putnam St. - Crossing Tompkins	C, P	The Fay Impr.Co.	1-17-54	8-24-54	2,112.40 (400.00)-
*Putnam St. (Portions) from Jarboe St. to Tompkins St.	C, P	The Fay Impr. Co.	1-6-54	8-17-54	3,569.50 (1,200.00)-
Capistrano Ave. - Block 3146 Drain	D, S	The Fay Impr. Co.	1-17-54	7-30-54	6,864.00 (3,900.00)-
France Ave. from Paris to Lisbon St.	C, P	E. J. Treacy	4-30-54	10-1-54	6,276.92 (3,700.00)-
Flint St. from 16th St. to 294' N 16th St. from Flint St. to 202' W & Intersection	S,C,P	Chas.L.Harney,Inc.	6-23-54	5-23-54	14,707.80 (3,200.00)
23rd St. - Texas (W/L) & 180' E - Pennsylvania St.	S	Eaton & Smith	7-14-54	10-19-54	9,097.50 (400.00)-
Chilton Ave. from Bosworth St. to Chenery St.	S,C,P	E. J. Treacy	7-14-54	12-17-54	6,885.40 (2,100.00)-

*Remaining Portions Improved under Public Contract

CURRENT CONTRACT DATA 1954-1955

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREETS - ASSESSMENT PROCEEDINGS (Continued)					
Pacheco St. from 48th Ave. to Great Highway	C, P				
Quintara St. from 48th Ave. to Great Highway	C, P	Chas.L.Harney,Inc.	7-14-54	10-8-54	$ 5,247.00 (2,500.00)-
Cambridge St. from Bacon St. to Wayland & Intersections	S,C,P	The Fay Impr. Co.	8-4-54	70%	5,897.00 (1,300.00)-
Hawes St. (W½) between Thomas Ave. & 100' N & Intersection	C, P	Chas.L.Harney,Inc.	7-14-54	11-29-54	5,739.50 (200.00)-
Cambridge St. (W½) from Felton St. to 25' S	P	The Fay Impr. Co.	7-14-54	70%	279.00 (200.00)-
Missouri St. from Sierra St. to 22nd St.	S,C,P	Chas.L.Harney,Inc.	9-8-54	70%	20,117.00 (700.00)-
Bacon St. from Harvard to Cambridge	S,C,P	The Fay Impr. Co.	9-8-54	60%	18,384.00 (6,400.00)-
Montcalm St. from Wright St. to Mullens Ave.	S,C,P	Chas.L.Harney,Inc.	12-15-54	5-26-55	9,738.60 (3,600.00)-
23rd St. from Carolina St. to Wisconsin St.	C, P	Chas.L.Harney,Inc.	12-15-54	5-12-55	4,822.40 (200.00)-
Colby St. from Dwight St. to Olmstead St.	S	The Fay Impr. Co.	12-10-54	3-11-55	4,259.00 (0.00)-
Dwight St. (S½) from Darthmouth St. to 70' E'ly	C, P	The Fay Impr. Co.	1-26-55	4-15-55	980.00 (800.00)-
Ward St. from Goettingen St. to Brussels St.	S,C,P	The Fay Impr. Co.	2-2-55	6-9-55	8,669.84 (3,700.00)-
25th St. from Pennsylvania Ave. to 3rd St.	S,C,P	Chas.L.Harney,Inc.	3-25-55	30%	48,705.00 (0.00)-

Charter Oak Ave. between Helena St. & 250' S Helena St. between Elmira St. & Charter Oak Ave.	S,C,P	Eaton & Smith	4-22-55	20%	$ 18,849.00 (12,300.00)-
Clarendon Ave. between Olympia Way & Laguna Honda Blvd. Olympia Way between Clarendon Ave. & Midtown Terrace	S	M. J. Lynch	5-25-55	1%	61,384.00 (51,772.00)-
*Bright St. (Portions) between Shields St. & Garfield St.	C, P	Chas.L.Harney,Inc.	6-8-55	0%	8,802.50 (5,300.00)-
Dwight St. between Brussels & Goettingen Sts.	S,C,P	Chas.L.Harney,Inc.	5-18-55	0%	8,203.60 (4,600.00)-
Total Awarded During Fiscal Year					$246,060.34
Total Value of Work Done During Fiscal Year					$134,530.67

*Remaining Portions of Street Under Private Contract

( )- Estimated Amount of City Obligation. Balance Through Assessment of Property Benefited. City Funds From Special Road Improvement Fund.

S = Sewers C = Curbs P = Paving W = Walks D = Drains

CURRENT CONTRACT DATA 1954-1955

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY					
Pine St. between Larkin St. & Franklin St. (Widening) Lowrie Paving Co., Inc.	3-24-54	8-24-54	$ 21,648.92	$ 20,458.92	Spec.Rd. Major Sts.
Battery St. between Market St., Broadway & Others (Resurfacing) Lowrie Paving Co., Inc.	3-31-54	7-23-54	43,234.00	28,189.00	Spec.Rd. Major Sts.
23rd St. between Dakota St. & Missouri St. (Curbs & Paving) Love & Haun	4-14-54	8-13-54	4,258.88	4,258.88	Spec.Rd.
Bay St. between Leavenworth St. & Van Ness Ave. & Others (Street Resurfacing) Lowrie Paving Co., Inc.	5-12-54	7-27-54	32,299.81	7,479.81	Spec.Rd. Major Sts.
Hunters Point Housing (Streets Within) (Reconstruction) Chas. L. Harney, Inc.	5-21-54 - - - -	10-13-54	37,020.10 - - - - -	37,020.10	Spec.Rd.
27th Ave. between Cabrillo & Fulton St. (Reconstruction & Sewer) The Fay Impr. Co.	7-14-54	11-10-54	20,902.48	20,902.48	Spec.Rd.
Baker St. between Vallejo St. & Union St. & Others (Brick Pavement Replacement) Lowrie Paving Co., Inc.	8-27-54	12-22-54	82,631.14	82,631.14	Spec.Rd.
Irving St. & Others (Resurfacing) Pacific Pavements Co., Ltd.	9-29-54	1-28-55	100,420.29	100,420.29	Major Sts. Spec.Rd.

*Harvard St. ($W\frac{1}{2}$) between Burrows & Bacon Sts. (Curbs Paving) The Fay Impr. Co.	11-17-54	10%	$ 6,325.00	$ 0	Spec.Rd.
Chestnut St. between Montgomery St. & Sansome St. (Reconstruction) Eaton & Smith	12-3-54	3-15-55	6,923.88	6,923.88	Spec.Rd.
Industrial St. & Others (Repair Pavement) Chas. L. Harney, Inc.	12-3-54	1-14-55	3,253.45	3,253.45	Spec.Rd.
Golden Gate Park Roads & Other Streets (Resurfacing) The Fay Improvement Co.	12-10-54	51%	78,860.00	34,595.00	Spec.Rd.
27th Ave. between Cabrillo St. & Fulton St. (Parking Lanes) Eaton & Smith	2-11-55	3-18-55	8,642.00	8,642.00	Spec.Rd.
Cragmont Ave. between Funston Ave. & Quintara St. (Resurfacing) The Fay Improvement Co.	3-2-55	3-25-55	2,506.08	2,506.08	Spec.Rd.
Stanley Drive between Junipero Serra Blvd. & Orizaba Ave. (Planting) Huettig & Schromm, Inc.	4-1-55	25%	29,867.06	5,625.00	Spec.Rd.
Bright St. ($E\frac{1}{2}$) between Stanley St. & 100' N (Reconstruction) The Fay Impr. Co.	4-8-55	35%	1,650.00	0	Spec.Rd.
Golden Gate Park Crossover, State Highway #56 (Construction of Pavement Center Islands) Pacific Pavement Co., Ltd.	4-27-55	6-20-55	5,124.00	5,124.00	State Hwy.

CURRENT CONTRACT DATA 1954-1955

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY (Continued)					
Powell St. (E½) between Bush St. & Anson Place (Widening) Love & Haun	4-20-55	6-9-55	$ 1,621.62	$ 1,621.62	Spec.Rd.
El Camino Del Mar & Others (Street Resurfacing) Lowrie Paving Co., Inc.	6-1-55	0%	21,358.00	0	Spec.Rd. Major Sts.
Sunset Blvd. between Rivera St. & Ortega St. (Improvement and Planting) Watkin & Sibbald	6-8-55	0%	34,673.00	0	Spec.Rd.
Total Awarded and Expended During Fiscal Year			$404,758.00	$369,651.65	

*Remaining Portions Improved Under Private Contract

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
B-4 STREETS - CAR TRACK REMOVAL					
Balboa St. betw. Arguello **Blvd.** & 31st Ave. - Arguello Blvd. betw. Turk St. & Balboa St. Turk St. betw. Divisadero St. & Arguello Blvd. (Track Removal & Pavement Reconstruction) Chas. L. Harney, Inc.	10-30-53	3-19-54	$286,524.68	$44,274.68	1947 St. Imp. Bond Major Sts. 1944 Sewer Bd.
Union St. betw. Van Ness & Baker Greenwich St. betw. Steiner St. & Lyons St. Steiner St. betw. Union & Greenwich Baker St. betw. Union St. & Greenwich (Track Removal & Pavement Reconstruction) Eaton & Smith	6-2-54	10-22-54	240,084.02	232,604.02	1947 St. Imp. Bd. Spec. Rd.
Castro St. betw. 18th & 26th Sts. (Track Removal & Pavement Reconstruction) Chas. L. Harney, Inc.	6-9-54	11-1-54	103,685.35	103,685.35	Spec. Rd. 1947 St. Imp. Bond
4th St. betw. Market St. & Townsend (Track Removal & Pavement Reconstruction) Lowrie Paving Co, Inc.	6-23-54	10-15-54	95,785.70	95,785.70	Spec. Rd. 1947 St. Imp. Bond
Geary Blvd. Betw. 33rd Ave. & 48th Ave. 48th Ave. betw. Geary Blvd. & Pt. Lobos (Track Removal and Pavement Reconstruction) Eaton & Smith	10-22-54	4-5-55	197,124.23	197,124.23	Spec. Rd. 1947 St. Imp. Bond

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
B-4 STREETS - CAR TRACK REMOVAL (Cont'd)					
San Jose Ave. betw. Niagara Ave. & County Line & Other Locations (Track Removal & Pavement Reconstruction) The Fay Improvement Co.	1-19-55	99%	$199,796.25	$165,325.00	Spec. Rd. 1947 St.Imp. Bond
Pine St. & Jones St. (Track Removal & Pavement Reconstruction) Eaton & Smith	5-13-55	21%	185,382.00	33,065.00	1947 St.Imp. Bond Spec. Rd.
Chestnut St. betw. Van Ness Ave. & Scott St. (Track Removal & Pavement Reconstruction) Chas.L. Harney, Inc.	5-25-55	0%	177,447.20	0	1947 St.Imp. Bond Spec.Rd. 1944 Sewer Bd.
Stockton St. Betw. Market St. & Tunnel (Track Removal & Pavement Reconstruction) Eaton & Smith	6-15-55	0%	65,267.50	0	Spec. Rd.Imp. 1947 St.Imp. Bond
Total Awarded and Expended During Fiscal Year			$825,017.18	$871,863.98	

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
C - TRAFFIC SIGNALS & CHANNELIZATION					
Mission District (Installation of Traffic Signal System) R. Flatland	1-2-53	9-15-54	$267,481.68	$ 42,571.68	Spec.Rd. Major Sts.
Traffic Signals At Isolated Crossings Contract #12 (Installation) Abbett Electric Corp.	5-19-54	3-23-55	74,001.30	70,561.30	Spec.Rd. Major Sts.
Traffic Signals At Various Intersections Contr. #1 (Modification Of) R. Flatland	5-26-54	8-20-54	17,017.50	17,017.50	Major Sts. Spec. Rd.
Traffic Signals At Isolated Crossings Contract #13 (Installation Of) R. Flatland	11-17-54	6-17-55	86,467.10	86,467.10	Major St. Spec. Rd.
Turk St. & Golden Gate Ave. betw. Jones & Divisadero Sts. (Traffic Signals) Abbett Electric Corp.	1-19-55	99%	66,746.00	49,200.00	Spec. Rd.
Duboce Ave. & Guerrero St. - Duboce Ave. & Valencia St. McCoppin St. & Valencia St. - Traffic Signals (Installation) Abbett Electric Corp.	3-23-55	25%	9,260.50	1,725.00	Spec.Rd.
Bryant & Harrison Sts. Traffic Signals (Contr. #2) (Traffic Signal System) R. Flatland	4-1-55	76%	55,017.00	31,650.00	Major St. Spec. Rd.
Fell St. & Oak St. betw. Schrader St. & Octavia St. (Traffic Signal Installation) Manning & Whitaker	4-13-55	17%	96,637.00	13,440.00	Spec. Rd.
Total Awarded and Expended During Fiscal Year			$314,127.60	$312,632.58	

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE					
Southeast Collecting Sewers Sec. E-3 Hunters Point Pumping Station Diversion Structure Force Main & Connecting Sewers (Construction) (Western Plumbing & Heating & W.Lenkeit&Co. Joint Venture)	9-16-53	8-13-54	$149,470.45	$ 27,070.45	1948 Sewage Tr. Bond
Skyline Sunset Outlet Sewer (2nd Contract) Zoo & 44th Ave. - Skyline Blvd. to Vicente St. (Construction) M. J. Lynch	10-16-53	8-23-54	166,896.40	58,181.40	1944 Sewer Bond
Silver Ave. - From Gambier St. to Congdon Congdon St. - From Silver Ave. to Alemany Blvd. (Replacement of Sewer) M & K Corp.	1-27-54	7-29-54	81,378.20	27,298.20	1944 Sewer Bond
Bluxome St. Sewer betw. 4th St. & 5th St. (Sewer Replacement) The Fay Improvement Co.	3-12-54	7-30-54	28,586.33	9,546.33	1944 Sewer Bond
Bush St. & Mason St. (Sewer Replacement) Associated Pipeline, Inc.	5-26-54	8-4-54	10,079.56	10,079.56	General
Funston Ave. betw. Taraval St. & Santiago St. (Sewer Replacement) Michael Murphy, Jr	6-18-54	8-19-54	8,061.85	8,061.85	General

Waller St. & Fillmore St. betw. Steiner St. & Duboce Ave. (Repair by Guniting) Cement Gun Construction Co.	6-18-54	8-10-54	7,801.40	$ 7,801.40	General
Peralta Ave. & York St. betw. Franconia & Precita (Sewer Reconstruction Prop."A") M. J. Lynch	6-16-54	9-3-54	5,572.00	5,572.00	General
El Camino Del Mar & Seacliff Ave. betw. Lake St. & 27th Ave. (Sewer Replacement)The Fay Improvement Co.	6-25-54	1-5-55	81,305.60	81,305.60	1944 Sewer Bond
Ingleside Sewer Section "C" In Urbano Drive, Pico Ave.,Ashton Ave. & Ocean Ave. -Pico to Miramar (Construction Of) M. J. Lynch	10-6-54	6-20-55	152,113.75	152,113.75	1944 Sewer Bond
Beach St. Sewer By-Pass Outlet in The Embarcadero At Beach St. & Grant Ave. (Construction) M & K Corp.	11-5-54	1-28-55	20,451.20	20,451.20	1948 Sewage Tr. Bond
Guttenberg Ave. Sewer Extension in Concord St., Hanover St., Watt Ave. & Bellevue Ave. (Construction of) Associated Pipeline Inc.	12-15-54	3-10-55	27,415.10	27,415.10	1944 Sewer Bond

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE (Cont'd)					
Bertita St. Northeast of Seneca Ave. to Alemany Blvd. (Relief Sewer) M. J. Lynch	12-15-54	3-24-55	$ 2,267.68	$ 2,267.68	1944 Sewer Bond
Haight St. Sewer betw. Divisadero St. & Scott St. (Sewer Replacement) Lowrie Paving Co., Inc.	3-9-55	6-8-55	3,395.78	3,395.78	1944 Sewer Bond
Fillmore St. betw. Germania St. and Duboce Ave. (Gunite Lining Sewer) Cement Gun Construction Co.	4-27-55	30%	7,555.50	0	General 1954 Sewer Bond
San Marcos Ave. Sewer - Santa Rita to 12th Ave. (Sewer Construction) M. J. Lynch	5-27-55	0%	2,466.00	0	1944 Sewer Bond
Diversion Structures at 10th & Harrison, 5th & Howard 7th & Howard St. (Alterations) Arthur Wallgren	6-8-55	0%	27,685.00	0	1954 Sewer Bond
Total Awarded and Expended During Fiscal Year			$243,350.01	$440,560.30	

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
D-2 - SEWERS - CONCRETE MONOLITHIC					
18th St. Sewer Sect. "A" Shotwell St. to Church St. 18th St. Harrison St. to Guerrero St. (Sewer Constr. & Street Widening) M & K Corp.	4-29-53	8-20-54	$650,713.44	$127,113.44	Spec.Rd. 1944 Sewer Bond
Cortland Ave. betw. Bradford St. & Bayshore Blvd. (Sewer Replacement) Eaton & Smith	5-26-54	9-15-54	37,742.50	36,542.50	General
Mendell St. Outlet & Sanitary Sewers From Davidson Ave. to Arthur Ave. (Mendell St. Sewer 2nd Contract) (Construction) Healy Tibbitts Construction Co.	12-8-54	6-14-54	158,024.40	158,024.40	1954 Sewer Bond
Southeast Collecting Sewers Sect. I-2 Ingalls St. Intercepting Sewer From Yosemite Ave. to Fitzgerald Ave. (Construction) Walter Lenkeit	2-2-55	61%	166,537.50	80,240.00	1948 Sewage Tr. Bond
Southeast Collecting Sewers Section I-1 Candlestick Point Sewer Tunnel (Construction) M & K Corp.	5-25-55	0%	680,900.00	0%	1948 Sewage Tr. Bond 1954 Sewer Bd.
Total Awarded and Expended During Fiscal Year			$1,005,461.90	$401,920.34	

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
E - MISCELLANEOUS					
Southeast Collecting Sewers Sect. B-1, B-2 (Fence Extension & Safety Signs) R. H. Wulfert	9-30-53	7-19-54	$ 309.00	$ 309,00	1948 Sewage Tr. Bond
Ingerson Ave. Near Griffith St. (Regrading & Recompacting Slide Area) Chas. L. Harney, Inc.	10-8-53	5-18-55	38,632.86	38,632.86	Spec. Rd.
3rd St. Bridge Over Channel St. Waterway (Alterations) Payne Construction Co.	12-4-53	6-20-54	84,518.86	18,118.86	Major St. Spec. Rd. 1947 St. Imp. Bond
Pinelake Pumping Station & Related Appurtenances (Construction) Hart & Hynding, Inc.	4-16-54	10-22-54	29,468.25	26,093.25	General
Municipal Asphalt Plant (Construction) Hart & Hynding, Inc.	5-5-54	5-13-55	418,753.89	400,733.39	Spec. Rd.
Parkmerced Pumping Station (Electrical Services & Misc. Work) Cimino Electric Co.	5-19-54	8-20-54	2,858.00	2,858.00	General
Jones St. Tank - Fire Dept. A.W.S.S. (Repairing, Waterproofing & Painting) Atlas Painting Co., Inc.	6-2-54	8-12-54	6,177.00	6,177.00	General
El Camino Del Mar - Test Borings P. & Z. Co.	6-2-54	7-20-54	303.45	303.45	Spec. Rd.
Fitzgerald Ave. & Griffith St. - Test Borings J. N. Pitcher Co.	6-16-54	7-13-54	150.00	150.00	General

Islais Creek & 4th St. Bridges (Repairs) Hart & Hynding, Inc.	6-16-54	9-17-54	$ 3,964.00	$ 3,964.00	Spec. Rd.
City Hall - New Electric Service (Connection to P.G.E. Vault) (Electric Service Connection Abbett ElectricCorp.	7-9-54	10-28-54	2,964.00	2,964.00	General
Southeast Sewage Treatment Plant (Reconstruction of 2 Mechanical Bar Screen Dead Plates (Reconstruction) Arthur Wallgren	7-9-54	10-5-54	4,095.00	4,095.00	General
Richmond Sunset Sewage Treatment Plant Additions and Betterments Contr.No.3.01 (Manholes, Curbs, Cover plates) M. J. Lynch	8-20-54	10-4-54	2,250.00	2,250.00	1948 Sewage Tr. Bond
Southeast Sewage Treatment Plant - 2 New Boilers & Related Facilities (Installation) Herman Lawson	8-18-54	6-3-55	114,361.06	114,361.06	1948 Sewage Tr. Bond
Hall of Justice - Retubing of Existing Boiler No. 2 (Reconstruction) Ocean Shore Iron Works	9-3-54	12-2-54	5,123.00	5,123.00	General
County Jail No. 2 - San Mateo County - Sewage Treatment Plant Alterations & Additions M. J. Lynch	10-6-54	2-11-55	13,924.00	13,924.00	General

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
E - MISCELLANEOUS (Cont'd)					
Twin Peaks Elementary School - Intercepting Drainage System (Construction) Eaton & Smith	10-20-54	11-30-54	$ 6,171.00	$ 6,171.00	1948 School Bond
19th Ave. at Wyton Lane - Woven Wire Fence (Construction) Colorado Fuel & Iron Corp.	10-18-54	12-13-54	815.00	815.00	Spec. Rd.
Sloat Blvd. Overpass at Sunset Blvd. - Tool and Storage Shed (Construction) Howard B. Nilsen	10-27-54	12-30-54	4,633.00	4,633.00	Spec. Rd.
El Camino Del Mar - 2nd Contract Removal of Slide Material Piombo Construction Co.	11-24-54	2-21-55	10,035.13	10,035.13	Spec. Rd.
Southeast Sewage Treatment Plant - Arches and Burner Rings in Dryer Furnaces #1 & 2 (Reconstruction) J.T. Thorpe & Son, Inc.	12-3-54	2-28-55	5,897.00	5,897.00	General
Southeast Sewage Treatment Plant - New Mud and Eductor Pumps Piping Hoists & Facilities (Installation) F. W. Spencer & Son	12-15-54	97%	35,292.00	26,475.00	1948 Sewage Tr. Bond
Air Raid Sirens - Two - Furnish, Install, Test One & Deliver One Brayer Electric Co.	12-22-54	3-29-55	1,844.00	1,844.00	General

Vicente Sewers Pumping Station - Electrical Service & Miscellaneous Electric Work (Installation)	Brayer Electric Co.	2-16-55	6-27-55	$ 3,891.00	$ 3,891.00	General
Portola Drive West of Granville Way Removal of Tree	Warner Tree Serv.	2-11-55	3-23-55	84.00	84.00	Spec. Rd.
3rd St. Bridge Over Channel St. Waterway (Cleaning & Painting)	Robt. A. Thompson	2-23-55	5-3-55	9,498.00	9,498.00	Major St.
Civic Auditorium - Replacement of Elevator Doors	Independent Elevator Co.	2-16-55	65%	9,319.00	4,575.00	General
Santiago St. (S½) betw. 22nd & 24th 22nd Ave. betw. Santiago & Taraval (Sidewalks)	Love & Haun	2-23-55	4-6-55	2,100.48	2,100.48	Spec. Rd.
Jackson St. Commercial Sewage Pumping Station Test Boring	P. & Z. Co.	3-2-55	4-19-55	412.30	412.30	1948 Sewage Tr. Bond
Shotwell St. A.W.S.S. betw. 19th & 20th Sts. (Construction)	E. J. Treacy	3-16-55	5-18-55	11,717.01	11,717.01	General
Fitzgerald Pumping Station and Related Sewers (Construction)	M & K Corp.	3-23-55	49%	88,888.88	37,825.00	General 1948 Sewage Tr. Bond

CURRENT CONTRACT DATA 1954-1955

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1954-1955	Fund
E - MISCELLANEOUS (Cont'd)					
Taraval Police Station - Hot Water Supply System & Miscellaneous Plumbing Work (Reconstruction) Leewal Heating	3-16-55	5-11-55	$ 1,446.00	1,446.00	General
Perry & Harrison St. in the Vicinity of 3rd St. Embarcadero Freeway A.W.S.S. (Alteration) Associated Pipeline, Inc.	3-4-55	99%	37,200.00	27,450.00	State Highway
City Hall Southwest Corner - Replacing Hot Water Risers (Alterations) Rodoni-Becker Co., Inc.	3-16-55	99%	7,788.00	3,075.00	General
Woven Wire Fence - Municipal Asphalt Plant (Construction Of) San Jose Steel Co.	4-27-55	0%	3,871.00	0	Spec.Rd.
Southeast Collecting Sewers Sect. H-1-2-3 in Candlestick Dr. & Adjacent Areas Test Borings J. N. Pitcher	4-27-55	90%	1,280.00	0	1948 Sewage Tr. Bond
Richmond Sunset Sewage Treatment Plant Cleaning Painting Digestor Dome (Repairs) M.A. Vidal Painting Co.	4-27-55	6-30-55	1,052.00	1,052.00	General
Richmond Sunset Sewage Treatment Plant Additions & Betterments Contract No. 3.02 (Installation of Boilers) E. A. Cornely, Inc.	5-18-55	0%	25,900.00	0	1948 Sewage Tr. Bond

4th St. Bridge Over Channel St. (Painting) D. E. Burgess Co.	6-8-55	0%	$ 2,820.00	$ 0	Major St.
3rd St. Bridge Over Channel St. Waterway (Welding & Painting Stair Treads) Acme Welding Co.	5-18-55	0%	691.20	0	Major St.
Main Public Library in Civic Center (Installation of New Switchboards) Manning & Whitaker	6-24-55	0%	13,632.00	0	General
Adult Guidance Center 150 Otis St. Installation of Boiler & Related Facilities (Installation) C.Passalacqua & Son	6-24-55	0%	5,030.00	0	General
Total Awarded and Expended During Fiscal Year			$434,025.06	$799,052.79	

APPENDIX II

BUREAU OF ARCHITECTURE

REPORT OF ACTIVITIES

Showing all work completed, contracts under construction,
and work under preparation - July 1, 1954 to June 30, 1955

WORK COMPLETED

Board of Education

New School Building Construction	
Columbia Park Elementary School	$ 282,509.52
Hillcrest Elementary School	101,122.66
Mark Twain Elementary School	710,140.18
Ridgepoint No. 3 Elementary School	903,536.93
San Miguel Elementary School	742,472.97
Silver Avenue Elementary School	862,636.65
Starr King Elementary School	596,154.54
Sunset Community Center JHS (A.P.Giannini JHS)	2,867,976.01
Miscellaneous Alterations	
Abraham Lincoln High School (Alterations)	24,250.48
Administration Building, Board of Education (Conversion of Locker Rooms for Audio Visual Aids)	24,489.48
Alamo Reconstruction (Exterior Reconstruction Work)	44,830.37
Alta Vista School (Exterior Reconstruction)	35,231.82
Alterations and Conversions of Heating Plants (Group I - Lafayette, Madison, Sutro, Dudley Stone, Sherman, John Swett)	66,266.00
(Group II - Edison, Farragut, Hawthorne, Kate Kennedy, Alvarado, Bryant)	59,923.00
Balboa High School (Cafeteria Alterations)	19,126.77
City College of San Francisco (Alterations to Science Building)	26,754.45
Continuation School (Exterior Reconstruction)	44,613.00
Guadalupe School (Electrical Work)	11,237.00
J. A. O'Connell Vocation and Technical Institute (Radio Tower)	14,569.00
Jean Parker School (Penthouse and Miscellaneous Repairs)	6,178.00
Mission High School (Cafeteria Alterations)	30,187.19
Monroe Elementary School (Electrical Work)	16,300.00

APPENDIX II

scellaneous Alterations (Continued)	
Polytechnic High School (Exterior Reconstruction and Principal's Office Alterations)	$ 94,592.31
Polytechnic High School (Foundry Conversion and Miscellaneous Alterations)	62,533.28
Portola Junior High School (Kitchen and Cafeteria Alterations)	38,769.00
Sunshine School (Alterations and Additions)	46,674.00
oustical Jobs	
Guadalupe School	12,555.00
Monroe Elementary School	19,909.00
ofing Jobs	
Benjamin Franklin JHS (Re-Roofing Girls' Gymnasium Building)	4,484.00
Commodore Stockton School (Repairs to the Roof Deck)	4,791.00
Edison School (Alterations & Repairs to Roof)	9,509.00
Fairmount School (New Roofing and Gutters)	11,387.80
Galileo High School (Re-Roofing)	17,106.80
Grattan School (Re-Roofing)	10,247.00
Jean Parker School (Repairs to Roof Deck)	12,747.00
Monroe School (Roof Alterations and Repair)	9,048.22
Nourse Auditorium (Re-Roofing)	4,436.00
Sunshine School (Roofing)	7,025.00
Washington Irving & Two Penthouse Roofs on Jean Parker School (Re-Roofing)	3,223.00
silient Flooring	
James Denman JHS	3,493.00
San Miguel School	5,393.00
terior or Exterior Painting	
Benjamin Franklin JHS	5,820.00
Emerson School	20,400.00
Everett JHS	21,664.00
Frank McCoppin	8,990.00
Galileo High School	46,212.00
Madison School	9,360.00
Marshall School	12,930.00

APPENDIX II

Interior or Exterior Painting (continued)	
Parkside School	$ 12,600.00
Patrick Henry School	4,341.00
Sanchez School	11,704.00
San Miguel School (First Unit)	4,818.00
Sutro School	7,400.00
Sunshine School	15,771.00
Yard Paving	
Balboa High School (Resurfacing of Yard Paving)	13,377.00
Bryant School	13,341.00
Parkside School	23,740.30
Spring Valley School (Resurfacing of Yard Paving)	7,142.00
Visitacion Valley School	22,287.00
Total Board of Education Work Completed	$8,130,326.73

Fire Department

Test Borings & Soil Analysis	
Engine 40, Project 7 - Stanyan-Grattan	$ 900.00
Engine 11, Project 9 - Shafter-Ingalls	1,395.00
Engine 34, Project 4 - Turk and Webster	1,000.00
Engine 26, Project 6 - Presidio-Euclid	1,000.00
New Construction	
Engine House No. 29 (Geological Investigation)	1,340.00
Engine House No. 29	159,082.02
19th and Folsom Street Fire House	529,217.36
Engine No. 26 (Rough Grading)	5,280.00
Reconstruction	
Engine House No. 33	2,731.00
Engine House No. 36 (Wm. McIntosh & Son)	12,582.00
Engine House No. 36 (Beacon Construction Co.)	3,089.43
Engine House No. 25	18,552.10
Engine House No. 39	68,159.43
Total Fire Department Work Completed	$ 804,328.34

Department of Public Health

San Francisco Hospital	
Surgical Suite, Remodelling Receiving Building - Part II	$ 104,128.68
New Boiler Room Doors in Power House	2,858.00
Interior Washing & Cleaning, Ward Bldgs. 10 and 20	9,731.00
Installation and Alterations for New Fire Escapes and Standpipe	7,472.00
Relocation of Hot Water Supply Lines	15,941.00
Alterations to Fourth Floor Nursery in Maternity Bldg.	12,616.00

San Francisco Hospital (continued)		
Replacement of Main Hot Water Supply and Return Lines, Part II	$	6,287.00
Automatic Sprinkler Fire Protection System - Wards 10, 20, 30, 40		19,687.00
General Repairs and Painting of Exterior Windows, Part I		23,540.00
General Construction of New Fire Doors and Partitions, Various Buildings		6,627.00
New Sanitary Floor and Miscellaneous Facilities		38,982.48
Installation of Fire Roads and Miscellaneous Work		55,505.10
General Repairs and Painting of Exterior Windows, Part II		21,069.00
General Roof Repairs for Various Buildings, Part I		10,695.00
Ward Kitchen Modernization - Ward Buildings 10, 20, 30, and 40		88,911.97
Alterations and Additions to Physiotherapy Department		37,775.29
Sunset Health Center		
Additional Lettering		385.00
Laguna Honda Home		
New Boiler and Auxiliary Equipment		159,571.92
Total Public Health Work Completed	$	621,783.44

M. H. deYoung Memorial Museum

M. H. deYoung Memorial Museum		
Conversion of the Brass Chandelier (Magnin English Room)	$	584.00
Refinishing Gallery Room 10, 12 K9 and K10		3,293.00
Additions and Alterations to Gallery		234,652.95
Exterior Garden Court Addition		11,712.56
Total M. H. deYoung Memorial Museum	$	250,242.51

Civic Center

City Hall		
Waterproofing of Interior Light Courts and Skylights, Second Floor	$	2,485.49
New Office Area, Basement Floor, for Traffic Fines Bureau		12,395.27
Removal of Paint and Paint Stains, Polk Street & Van Ness Avenue Step Abutments		145.00
Civic Auditorium		
Installation of Asphalt Tile		5,955.00
Total Civic Center Work Completed	$	20,980.76

APPENDIX II

Miscellaneous

California Palace of the Legion of Honor New Fire Wall and Doors for Workshop	$ 3,064.3
County Jail No. 1, Plumbing for Felony Wing	3,906.0
Hall of Justice, Alterations to Court Room and Offices Department No. 11	4,599.0
Municipal Records Center, 150 Otis Street Alterations for the Fourth and Fifth Floors	8,987.0
Youth Guidance Center, Security Sound System	12,332.8
Total Miscellaneous Work Completed	$ 32,889.1
TOTAL ALL WORK COMPLETED	$9,860,550.8

WORK UNDER CONSTRUCTION

Board of Education

		Perce Comple
New School Building Construction		
City College Cafeteria	$ 658,978	99
Commodore Stockton Elementary School	789,138	1
Funston-Santiago Junior High School	2,967,928	63
Lake Merced Elementary School	1,002,834	50
Patrick Henry Elementary School	131,211	55
Sunnydale Elementary School	227,266	75
Miscellaneous Alterations		
Administration Building (New Electric Passenger Elevators)	53,670	0
Alta Vista School (Reconstruction)	6,460	15
Argonne School (Paving)	12,988	15
Boiler Conversion (Various Schools)	90,656	10
Counselling Rooms (Balboa High School, Washington High School)	13,914	0
Fairmount School (Electrical)	11,128	0
Flooring (Various Schools)	15,271	10
Polytechnic High School (Windows)	18,924	10
Yerba Buena School (Reconstruction)	16,600	10
Painting		
Andrew Jackson School	9,256	30

		Percent Completed
Painting (continued)		
Aptos School	$ 2,950	5
Continuation School	9,300	10
Francis Scott Key School	11,128	20
Grant School	10,800	20
I. M. Scott School	9,700	10
Jean Parker School	13,488	10
Raphael Weill School	19,649	20
Redding School	11,711	20
Sarah B. Cooper School	10,970	95
Washington Irving School	10,641	15
West Portal School	15,985	10
Acoustical Work		
Benjamin Franklin School	$ 724	5
Fairmount School	16,767	0
Roofing		
Board of Education Warehouse Bldgs.	$ 5,512	0
Cleveland School	3,932	10
Raphael Weill School	5,275	50
Sarah B. Cooper School	4,051	10
Total Board of Education Work Under Construction	$ 6,188,805	

Fire Department

		Percent Completed
New Construction		
Project 9, Engine No. 11	$ 189,182	45
Project 6, Engine No. 26	224,765	45
Project 4, Engine No. 34	204,020	55
Project 7, Engine No. 40	211,111	20
Reconstruction		
Project 103, Engine No. 5	$ 92,951	65
Project 128, Engine No. 46	56,583	45
Engine No. 27 (Overhead Doors)	1,539	
Total Fire Department Work Under Construction	$ 980,151	

Department of Public Health

		Percent Completed
San Francisco Hospital		
Elevators, Ward Bldgs. 10, 30, 40	$ 106,499	75
Laguna Honda Home		
Alterations to Kitchen, Bakery and Commissary	$ 270,869	10
Total Public Health Work Under Construction	$ 377,368	

Miscellaneous

		Percent Completed
City Hall		
Marble Floors	$ 3,850	30
Women's Toilet	3,349	90
deYoung Museum		
Roofing	2,575	10
Public Welfare Department 150 Otis Street	41,166	40
San Francisco Disaster Council and Corps Ft. Miley Ground Observer Shelter	2,986	25
Youth Guidance Center		
Painting	13,700	0
Miscellaneous Work	6,889	0
Total Miscellaneous Work Under Construction	$74,515	
TOTAL ALL WORK UNDER CONSTRUCTION	$7,620,839	

WORK UNDER PREPARATION

Board of Education

New School Buildings	
Burnett Elementary School (Project No. 18, Phase II)	$ 84,000
Luther Burbank Junior High School (Project No. 8)	2,750,000
Ridgepoint No. 2 (Project No. 27)	950,000
Silver Avenue Junior High School	1,860,000
Miscellaneous Alterations	
Administration Building (Electrical Work)	6,000
Aptos Junior High School (Window Reconstruction)	20,000
Bret Harte Elementary School (Project No. 10, Phase II)	18,000
City College (Machine Shop)	42,000
City College (Bungalows)	25,000
City College (Paving)	25,000

APPENDIX II

Miscellaneous Alterations (continued)	
City College (Electronics Laboratory)	$ 22,000
Commodore Sloat Elementary School (Window Reconstruction)	15,000
James Lick Hunior High School (Exterior Reconstruction)	18,000
Madison Elementary School (Yard Extension)	9,000
Total Amount of Work Under Preparation for the Board of Education	$ 5,844,000

Department of Public Health

Laguna Honda Home (Bond Issue)	
Project I - Modernization of Clarendon Hall	$ 1,127,000
Project II - Power House & Related Work	300,000
Project III- Elevators, Connecting Corridors and Related Work	350,000
Project IV - Commissary Roads, Parking and Related Work	500,000
Project V - M & O and Related Work	450,000
Project VII - Laundry Modernization	202,000
Project X - Steam Mains and Returns	221,000
Alterations to Ward Serving Kitchens, Bldgs. E,K,L,M	17,500
Laguna Honda Home (Non Bond Jobs)	
Fire Doors and Enclosures	50,000
Fire Alarm System	19,000
Replace Plumbing, Ward Bldg. "A"	156,700
Alterations to Electrical Work, Main Building	50,000
Replace Circuit Breakers, Main Building	4,000
Weatherproofing - Main Building and Building "A"	20,000
Exterior Repairs Building "A"	20,000
Replace Steam Valves - Building "A"	3,250
Essential Window Repairs	60,000
Replace Vacuum Breakers	4,500
Replace One Water Tank	46,200
San Francisco Hospital (Bond Issue)	
Project I - Modernization of Maternity Building	546,000
Project II-A - Admission Emergency and Social Service	160,000
Project II-B - New Electric Generating Facilities	60,000
Project II-C - Modernization of Service Bldg., Connecting Passageway, New Elevator, Locker and Dressing Room	200,000
Project II-D - Miscellaneous Modernization of Diet Laboratory, Garbage Area, Fire Survey and Other Requirements	184,000
Projects III, IV, V, and VI - Exit Stairs, Buildings 40, 30, 20, and 10	160,000

APPENDIX II

San Francisco Hospital (Non Bond Jobs)	
Dark Room Alterations	$ 4,
Emergency Ward Remodeling	16,
Fire Roads - Phase II	33,
Rotating Oven	13,
Elevator, T. B. Building (Incl. Essential Fire Protection)	55,
Replace Water and Steam Mains, Maternity Bldg.	200,
Replace Defective Plumbing, Service Bldg.	43,
Replace Defective Steam Mains, Service Bldg.	48,
Roof, Gutters, and Other Exterior Repairs	18,
Exterior Painting	20,
Flooring in Service Bldg.	8,
Alterations to Bakery	60,
Alterations to Vegetable Preparation Room	7,
Replace Boiler Breeching	6,
Total Amount of Work Under Preparation for the Department of Public Health	$5,444,

Fire Department

New Construction	
Project 2, Engine No. 12	$ 315,
Project 20, Engine No. 38	204,
Reconstruction	
Project 111, Engine No. 6	$ 97,
Project 112, Engine No. 4	135,
Project 107, Engine No. 15	32,
Project 113, Engine No. 18	55,
Project 130, Engine No. 20	95,
Project 122, Engine No. 24	31,
Project 120, Engine No. 28	87,
Project 109, Engine No. 41	100,
Project 11, Engine No. 45	80,
Project 118, Engine No. 47	48,
Project 125, Engine No. 48	34,
Project 116, Engine No. 49	47,
Total Amount of Work Under Preparation for the Fire Department	$1,363,

Miscellaneous

Hyde Street Office, Bureau of Architecture	$ 5,
Palace of Legion of Honor, Emergency Work	99,
Log Cabin Ranch, Recreation Building	50,

iscellaneous (continued)

entral Communications Station		
Department of Electricity	$	152,000
ublic Library		
Sunset Branch Library (Ortega Branch)		132,000
Main Library		
Install rubber tile flooring in Reference, Art and Documents Room		6,000
orthern Police Station		
Replace window frames and sash		5,200
outh Guidance Center		
Repair damaged doors and install on Closets B1-2-4		3,500
ivic Center Exhibit Hall (Architects: Wurster, Bernardi & Emmons; Skidmore, Owen & Merrill. Structural Engineer: H. J. Brunnier, Mech. and Elec. Engineer: DeLeuw Cather & Company)		2,750,000
og Cabin Ranch, Master Plan		2,500
otal Amount of Work Under Preparation for Miscellaneous Departments	$	3,206,835
OTAL AMOUNT OF ALL WORK UNDER PREPARATION	$	15,858,416

WORK IN PRELIMINARY DESIGN STAGE

Fire Department Work

952 Firehouse Bond Issue		
Firehouse Engine 7	$	150,000
Firehouse Engine 14		150,000
Firehouse Engine 21		150,000
Firehouse Engine 37		150,000
tal Fire Department Work	$	600,000

Department of Public Health

954 Laguna Honda Bond Issue		
Project VI	$	178,000
Project VIII		1,092,104
Project IX		60,000
Miscellaneous Projects		437,000
btotal Laguna Honda	$	1,767,104

1954 San Francisco Hospital Bond Issue		
Project III	$	856,250
Project IV		464,750
Project V		842,250
Project VI		709,750
Project VII		464,000
Project VIII		725,000
Project IX		368,500
Project X		50,000
Subtotal San Francisco Hospital	$	4,480,500
Total Public Health Work		6,247,604
TOTAL AMOUNT OF ALL WORK IN PRELIMINARY DESIGN STAGE		6,847,604
GRAND TOTAL OF ALL WORK COMPLETED, UNDER CONSTRUCTION, UNDER PREPARATION AND IN PRELIMINARY DESIGN STAGE	$	40,187,409.88

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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF
SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1956

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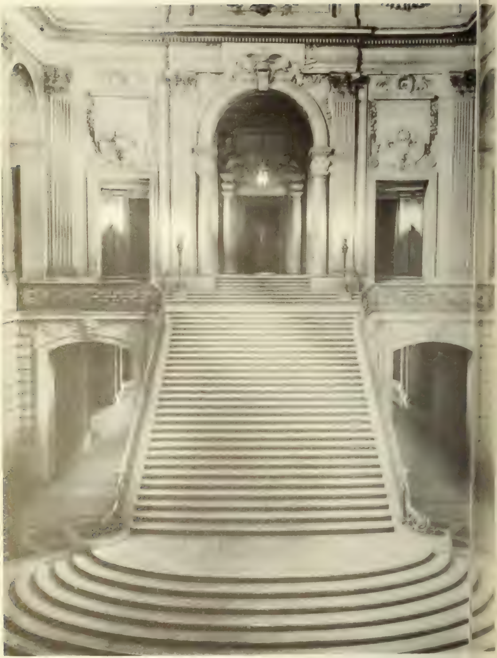
ANNUAL REPORT
OF THE
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1956

GEORGE CHRISTOPHER	MAYOR
THOMAS A. BROOKS	CHIEF ADMINISTRATIVE OFFICER
SHERMAN P. DUCKEL	DIRECTOR OF PUBLIC WORKS



CITY HALL
MONUMENTAL STAIRWAY LEADING FROM MAIN FLOOR
TO BOARD OF SUPERVISORS CHAMBERS

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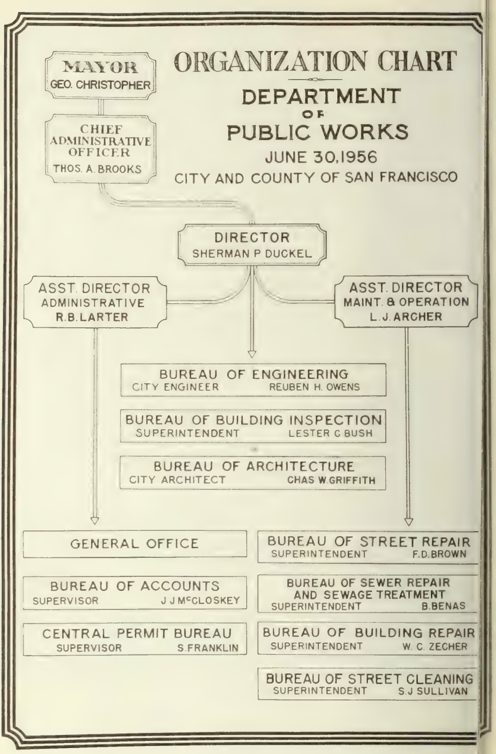
I – Current Contract Data, Bureau of Engineering

II – Current Contract Data, Bureau of Architecture



ORGANIZATION CHART

DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1956

CITY AND COUNTY OF SAN FRANCISCO

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE
DIRECTOR OF PUBLIC WORKS

260 CITY HALL
SAN FRANCISCO 2,
CALIFORNIA

January 18, 1957

Annual Report
1955-1956

Honorable Thomas A. Brooks
Chief Administrative Officer
City and County of San Francisco

Dear Mr. Brooks:

The Annual Report of the Department of Public Works for the fiscal year ending on June 30, 1956, is respectfully submitted herewith in accordance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

The report is divided into nine sections covering the activities of the Bureaus of the Department. The summaries of the current contract data under the Bureaus of Engineering and Architecture will be found in Appendices I and II at the end of the report. Operational data on the Sewage Treatment Plants are compiled in a separate report which will be made available to those interested.

The Department lost the valued services of Ralph G. Wadsworth, City Engineer, who retired on September 1, 1955. Mr. Wadsworth served the City faithfully and well during his ten years as City Engineer and will be missed by those who worked with and for him. This position was filled by the appointment of Mr. Reuben H. Owens a career employee formerly the Senior Engineer in charge of design for the Bureau of Engineering of this department.

Work on projects financed by the several bond issues under the jurisdiction of this Department has been expedited to the full extent of the manpower available in the Bureaus of Architecture and Engineering. The shortage of professional engineers is as acute with this Department as it is with all governmental agencies in the Nation, with the result that entrance grade positions cannot be filled.

On July 1, 1955 the Street Tree Planting Division was created in the Bureau of Street Cleaning, complying with Ordinance Number 8993, approved on February 9, 1955, which transferred this function from the Recreation-Park Department. Although the Department was handicapped in properly maintaining existing planting because of a lack of sufficient funds it was most fortunate in gaining the volunteer advisory services of experienced and capable horticulturists and arborists. In behalf of the City and this Department I wish to personally thank the Messrs. Roy L. Hudson, Supervisor of Maintenance for the Park Department; Harry E. Nelson, Head of the Division of Horticulture at City College; and Keith L. Davey, President of the Davey Tree Surgery Company, who have given so freely of their time, thought and helpful guidance toward advancing the street-side tree program for this city.

For the first time since the inauguration of the Safety Program in 1952, the total number of lost-time injuries took an appreciable jump over the previous year with 113 in the past fiscal year as compared to 86 in 1954-55, 82 in 1953-54, and 97 in 1952-53. It is the belief of the Staff Safety Committee that this increase is due, in large part, to a definite increase in personnel safety consciousness resulting in more accidents being reported that previously.

The 24 mobile radio sets used on Department vehicles made a total of 8,317 calls during the year, an average of about 33 calls per day. Their use has improved the control of personnel in the field and has expedited the services to the public in response to the many requests for emergency street and sewer work.

I would like to thank Mr. L.J. Archer and Mr. R.B. Larter, Assistant Directors, and all Bureau heads and their staffs for their fine co-operation and assistance in the operation of the Department. I must also thank you, Mr. Brooks, for your continuing assistance and support in all matters pertaining to the Department.

Very truly yours,

Sherman P. Duckel

Sherman P. Duckel, Director
Department of Public Works

BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART
JUNE 30,1956

CITY ENGINEER
ASS'T CITY ENGINEER

STAFF DIVISIONS

CONTRACT ADMINISTRATION
PAYMENTS-RECORDS

OFFICE MANAGEMENT
PERSONNEL-PURCHASING

LINE DIVISIONS

DIVISION OF STREETS & HIGHWAYS
- 1-STREET IMPROVEMENTS
  - (a) IMPROVEMENT PLANS
  - (b) ASSESSMENTS
  - (c) PERMITS & INSPECTIONS
- 2-HIGHWAYS
- 3-TRACK REMOVAL CONTRACTS
- 4-PLANS & RECORDS

DIVISION OF DESIGN
- 1-ADMINISTRATIVE
- 2-STRUCTURAL
- 3-SEWERS
- 4-SANITARY & SPEC. PROJECTS
- 5-MECHANICAL
- 6-ELECTRICAL
- 7-UNDERGROUND STRUCTURES
- 8-HYDRAULICS
- 9-SPECIFICATIONS & ESTIMATES

LINE DIVISIONS

DIVISION OF TRAFFIC ENGINEERING
- 1-DESIGN
- 2-OPERATION
- 3-MAINTENANCE

DIVISION OF SURVEYS & MAPPING
- 1-STREET GRADES
- 2-SUBDIVISIONS
- 3-SURVEYS

LINE DIVISION

DIVISION OF CONSTRUCTION
- 1 INSPECTION
- 2 TESTING LABORATORY
- 3-SANITARY FILL
- 4-RECORDS REPORTS

BUREAU OF ENGINEERING

Reuben H. Owens, City Engineer

GENERAL REVIEW OF YEAR'S WORK

The functions of the Bureau of Engineering are indicated by the Organization Chart on the opposite page. The greater part of the Bureau's work is the design and preparation of the plans specifications and contract documents, and the supervision of construction, of a wide variety of improvements under the jurisdiction of the Department of Public Works. While street and sewer improvements continued to predominate, a large part of the work was concerned with the sewage treatment plants and pumping stations and with a wide variety of projects on buildings and facilities of other departments ranging from steam boilers at the City Hospital, the Adult Guidance Center and the Laguna Honda Home, to rehabilitation and new refrigeration at the Morgue and to additional sirens for civilian defense, a new switchboard at the Main Public Library and landscaping at the Broadway Tunnel. In addition to design and contract work the Bureau maintains maps and records for public information, makes a continuing inspection of the condition of streets and sidewalks and initiates the correction of defects. It also studies and reviews various projects such as State freeways proposed within the City and off-street parking proposals of the Parking Authority.

HIGHLIGHTS OF THE PAST YEAR

No acceleration of the Bureau's work program was possible due to inability to recruit any significant number of new employees. At the end of the year there was no sign of improvement in the supply of qualified men in the field of engineering.

The new 1956 edition of the Standard Specifications of the Bureau was printed and issued in January. It is a very complete revision of the 1947 edition, which it supersedes. Its 256 pages cover the broad scope of the Bureau's work and are the result of an extended and laborious review of suggestions and comments accumulated since publication of the previous edition. Much new material was added and every effort was made to correct and avoid ambiguities and omissions.

UMMARY OF CONTRACTS

The current contracts which were awarded or were under way during the fiscal year under plans and specifications prepared by the Bureau are summarized in Table I. This summary is repeated for convenience at the beginning of Appendix I. which lists each of the

TABLE I.

CURRENT CONTRACT DATA SUMMARY SHOWING ALL CONTRACT WORK AWARDED OR UNDER WAY July 1, 1955 – June 30, 1956

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1955–1956
A	Major Thoroughfares	3	$ 415,062.72	$ 734,112.77
B-1	Streets – Private Contracts	19	180,537.00	373,655.00
B-2	Streets – Assessment Proceedings	18	162,523.30	232,032.34
B-3	Streets – Public Contract City Pay	7	359,393.47	476,520.99
B-4	Streets – Car Track Removal	3	369,221.09	664,252.86
C	Traffic Signals and Channelization	7	289,185.83	260,583.74
D-1	Sewers – Pipe, Vitrified Clay and Concrete	6	563,067.88	304,543.80
D-2	Sewers – Concrete Monolithic	3	274,503.60	648,974.51
E	Miscellaneous	36	955,698.51	416,887.31
	TOTALS	102	$3,569,193.40	$4,111,563.32

individual contracts that comprise the several construction categories. Both the table and appendix show the amounts expended on the contracts during the fiscal year whether work began that year or during a previous fiscal year and whether the work was or was not yet completed.

The number of contracts was 16 less than the preceding year and their total cost was less. However, the contract payments, representing the construction accomplished, increased by 6 percent. The value of the contracts awarded in categories D-1 and E was more than doubled in each case but there was a considerable decrease in new street improvements under private contracts and assessment proceedings. This can be attributed to the decline in the number of unimproved streets and to the increasing proportion of those that will require expensive grading and structures.

The value of contracts awarded and the annual expenditures are shown graphically for a ten year period in Figure 1. The locations of most of the contracts awarded are indicated in Figure 2.

CONTRACTS AWARDED AND PAYMENTS MADE

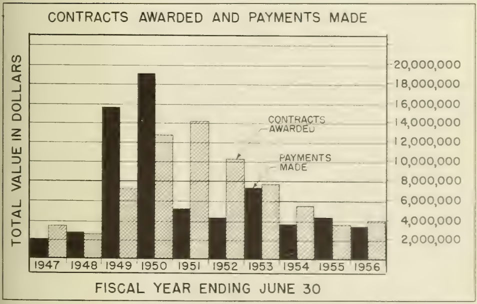


Fig. 1

PUBLIC BUILDING CONTRACTS

The contract summary in Table E and the detailed listing contained in Appendix I include a number of contracts for the improvement of public buildings and other facilities. Brief descriptions, with contract costs, of the more unusual of these "capital improvement" projects follow:

Civic Center Powerhouse - Power Plant Conversion

In keeping with the modernization and renovation capital improvements program on public buildings, it was decided to convert the Civic Center Power House boilers from oil fuel to natural gas fuel. The City beside receiving the benefits of a lower fuel price, would also substantially reduce air pollution in this area. Plans and specifications were prepared and the project is under construction ($13,266).

Bureau of Traffic Fines - City Hall Ventilating Equipment

The Bureau of Traffic Fines is located in the north wing of the City Hall with a large glass ceiling exposed to the sun. The effective room temperature is thus uncomfortably high on sunny work days.

This unsatisfactory condition was remedied by increasing the rate of air circulation by means of an exhaust fan and the installation of new air distributing devices in the existing supply duct outlets ($1,988).

Coroner's Office and Morgue Rehabilitation

The work consisted of providing up-to-date ventilation, plumbing, heating and electrical facilities; replacing outmoded and faulty equipment, particularly refrigerator boxes, laboratory equipment; and furnishing and providing urgently needed and modernly refurbished reviewing and reception rooms.

Partitions, floors and ceilings were altered and replaced as necessary to accommodate the new facilities, and to provide an improved floor plan to facilitate the performance of the duties of the staff. The laboratories and autopsy rooms were constructed with terrazzo flooring, terrazzo and plastic laminate wainscot, plastered walls and ceilings and the interior of the building was redecorated throughout ($133,119).

In addition, the Bureau prepared electrical, mechanical and structural plans, specifications and estimates for the Bureau of Architecture for inclusion in certain of its contracts for the reconstruction of fire houses, new improvements at the San Francisco

Hospital and Laguna Honda Home, and other miscellaneous jobs as summarized below. The value of the construction covered by these plans amounted to about $600,000.

The Bureau also made budget estimates for capital improvements for various departments on approximately 109 projects ranging in scope and size from the installation of a few flourescent lights to the construction of a new Maintenance Yard for the Department of Electricity. Many of these estimates took considerable time and effort since preliminary designs were required before realistic estimates could be made.

LOCATION OF CONTRACTS AWARDED

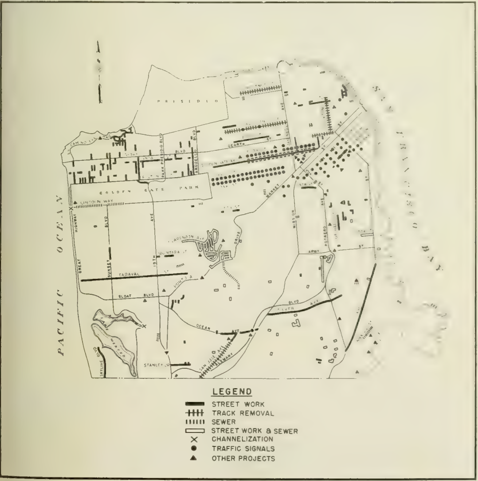


Fig. 2

FREEWAY PROGRAM

CITY FREEWAYS

Preliminary planning for the City's section of the Souther Freeway between James Lick Memorial Freeway and the propose Southern Crossing of the Bay is rapidly nearing completion. Th firm of De Leuw, Cather and Company, Engineering Consultants, i performing this work under contract and will submit its report i July next. Public hearings will be held in the near future by th Department of Public Works to explain the project before seekin authorization of the Board of Supervisors to proceed with the preparation of final plans.

The same firm was also, under a separate contract, preparin preliminary plans and estimates for the Crosstown Freeway, whic will provide a connecting link between the State section of Souther Freeway and the proposed Western Freeway. The work was abou 30% completed and it was anticipated that the plans and report woul be submitted early in 1957.

STATE FREEWAYS

Embarcadero Freeway

Construction advanced rapidly under a State of California, Division of Highways contract, on the first unit of the Embarcadero Freeway. The unit is in the nature of a giant interchange structure between the San Francisco - Oakland Bay Bridge and the James Lick Memorial Freeway on the one hand and the Embarcadero Freeway and the Main Street - Beale Street ramps on the other.

James Lick Memorial Freeway

The construction of James Lick Memorial Freeway between 3rd Street and Bayshore Boulevard and the County Line was still under construction with completion anticipated for mid 1957.

Southern Freeway

The route of the Southern Freeway was adopted by the California Highway Commission on June 21, 1956. The route is from Alemany Boulevard and Orizaba Avenue via the Southern Pacific Company's right-of-way to Monterey Boulevard and San Jose Avenue thence to Alemany Boulevard and Mission Street, along Alemany Boulevard to the James Lick Memorial Freeway where it will connect with the City's Southern Freeway that will extend to Tennessee and 23rd Streets and the proposed Southern Bay Crossing.

PLAN OF FREEWAY SYSTEM

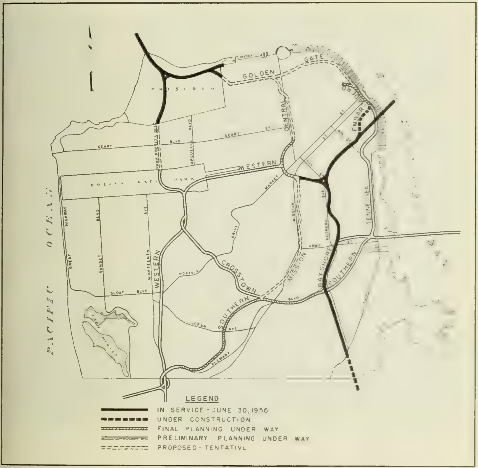


Fig. 3

entral Freeway

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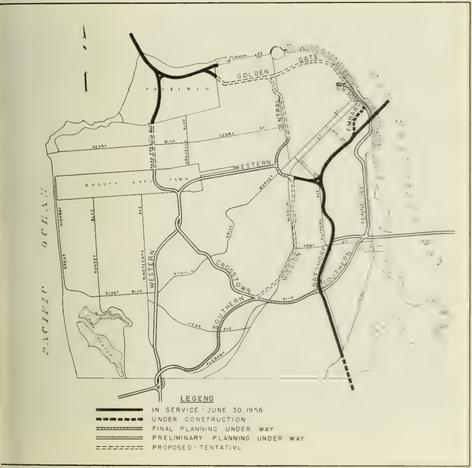

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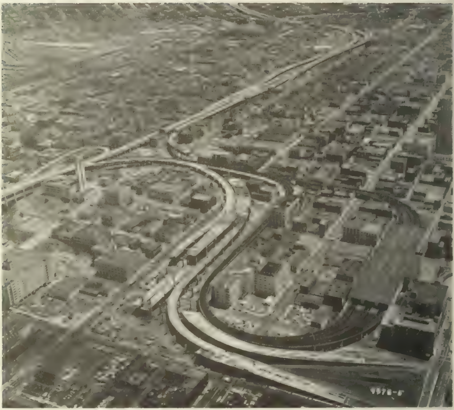
FREEWAYS



EMBARCADERO FREEWAY
Ramps West Approach Bay Bridge
Under Construction

FREEWAYS

JAMES LICK MEMORIAL FREEWAY
3rd Street to County Line
Under Construction

STREET AND HIGHWAY IMPROVEMENTS

Thirteen street and highway contracts totaling $1,143,67 were awarded during the 1955-1956 fiscal year. These contract the largest of which amounted to $201,000, accounted for the im provement of approximately 24-1/2 miles of city streets and high ways. They were financed from the City's share of the State gasoli taxes and from bond proceeds and are listed in Appendix 1, Table A, B-3, and B-4. Although the total value of these contracts is ap proximately 42% less than the last year, it is noteworthy that th mileage of improvements decreased less than 4%.

MAJOR THOROUGHFARES

Three of the above contracts totaling $415,063 were for the im provement of 2.67 miles of major thoroughfares. The largest ar most important contract was for the second and final section of th Thirteenth Street Widening project from South Van Ness Avenue Bryant Street. A description of this project may be found in la year's Annual Report.

Skyline Boulevard Widening

The widening of Skyline Boulevard from Lake Merced Boule vard to the County Line was completed on March 16, 1956 by Charle L. Harney, Inc., Contractors, at a total cost of $358,608. Th same contractor also completed widening Skyline Boulevard in Sa Mateo County from the County Line south to the Alemany Boulevar intersection under a contract with the State Division of Highway Both sections were opened to traffic simultaneously in March, 195

In addition to widening both sections to four lane divided road ways, the alignment and grade line were improved to 50 miles pe hour highway standards. Complete channelization was constructe at the Lake Merced Boulevard intersection including turning ar merging lanes and fluorescent safety lighting.

STREET IMPROVEMENTS

Seven of the contracts were for resurfacing old pavements a for the replacement of outmoded brick and basalt block paving wi modern type pavement. These contracts, aggregating $359,39 accounted for the improvement of 19.50 miles of city streets.

SKYLINE BLVD.
Lake Merced Blvd. to County Line
Before Construction

SKYLINE BLVD.
Lake Merced Blvd. to County Line
After Construction

TRACK REMOVAL AND STREET RECONSTRUCTION

Three contracts totaling $369,221 were for the removal of tracks from 2.40 miles of city streets. Two of these contracts have been completed.

The plans for the removal of tracks from Columbus Avenue and North Point Street were completed during this fiscal year, but construction was deferred to prevent interference with business activities during the tourist, convention and Holiday seasons. This project, estimated to cost $260,000, is 1.09 miles long and will be undertaken early in 1957.

The track removal program is rapidly nearing completion. To date, tracks have been removed from 109.82 miles of streets and work is under way on 0.64 additional miles. Only 4.39 miles of abandoned tracks will remain after the work now under way is completed. Figure 4 shows the status of the track removal as of June 30, 1956.

TRACK REMOVAL PROGRAM TO JUNE 30, 1956

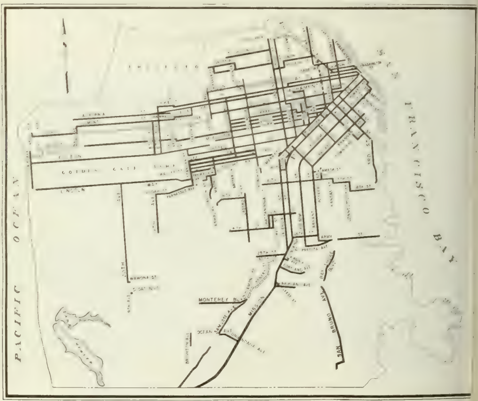


Fig. 4

PLANS FOR FUTURE WORK

Plans for a number of street and highway improvements have been completed or are nearing completion and several will be under contract in the coming fiscal year. The more important ones are commented upon or listed hereinafter.

Market-Portola Widening

Plans for the widening and realignment of Market Street from Hattie Street to Corbett Avenue were completed and approved by the State Division of Highways near the end of the fiscal year. On June 6, 1956, a call was issued for bids to be submitted on July 11, 1956. This is the third unit of the improvement of the Market-Portola route between Douglass Street and Sloat Boulevard. Except for the Broadway Tunnel, it will be the largest highway contract ever undertaken by the City. It is estimated that the bid price will amount to about $2,750,000 and that construction will take about two years to complete.

It is expected that plans for the fourth and final unit, the widening and realignment of Portola Drive from Evelyn Way to Sloat Boulevard, will be completed and construction started toward the end of he next fiscal year.

Both unit three and unit four will be finished at about the same ime, during the Fall of 1958, thereby bringing to completion a project which has been the subject of considerable controversy and hanges since it was first conceived almost twenty years ago.

Other Improvements Being Planned:

ackson Street: Hyde-Steiner	Track Removal	$ 165,000
Washington Street: Hyde-Steiner	Track Removal	175,000
irst Street and Fremont Street: Market-Mission	Track Removal	45,000
Geary Boulevard: Masonic-33rd Avenue	Widening and Track Removal	1,775,000
Chenery Street: 30th-Diamond	Reconstruction	146,000
olumbus Avenue-North Point Street	Track Removal	215,000
ake Street - 6th - 28th Avenues	Reconstruction	294,000
Geary Expressway: Franklin-Broderick		750,000
Total Preliminary Estimated Cost		$3,565,000

STREET IMPROVEMENTS FINANCED BY PROPERTY OWNERS

All street construction which was financed in whole or in pa by the owners of fronting property and for which permits were grant or for which public assessment contracts were awarded during th 1955-1956 fiscal year together with those authorized but not complet in the previous fiscal year, are listed in detail in Appendix I, Tabl B-1 and B-2.

PRIVATE CONTRACTS

Table B-1 lists the street improvements which were construct under private contracts negotiated directly between the proper owners and contractors of their own choice. The Department's o function in private contract work is to grant the permit, furnish t plans and specifications, and inspect the work during constructi so that the improvements can be accepted by the City for mainteance. Nineteen permits for private contracts aggregating $180,57 were issued during the year.

ASSESSMENT CONTRACTS

Table B-2 lists similar street projects which were done und public contract awarded by the City, the cost being assessed in wh or in part against the property owners benefited by the work. Th procedure is in accordance with the Street Improvement Ordinan of 1934 which provides for preparation of plans and specification notification of property owners, public hearings, awarding of cotract, supervision of construction, and final levy of assessment the property. In many cases, City Aid is extended in order to rduce individual assessments to the legal limit which is defined two and one-half times the lot valuation. The City also contribut funds according to established rules in order to prevent excessi assessments on residential corners, irregular lots and property haing disproportionately long frontage. Eighteen assessment contra were awarded totaling $162,523.

Table II indicates the volume of work involved in the assesment proceedings for the eighteen contracts.

TABLE II

STREET WORK PROCEEDINGS INSTITUTED UNDER THE STREET IMPROVEMENT ORDINANCE OF 1934

Resolutions of Intention pass	18
Street Improvement Projects recommended to the Board of Supervisors	20
Notices of Street Improvement posted	564
Notices of Resolution of Intention mailed	443
Ordinances order performance of street improvements passed	19
Proposals for street improvements published	22
Awards of Contract for street improvements	18
Notices of Recordation posted	174
Notices of Recordation mailed	225
Private contracts granted	17
Assessments issued (total amount $238,033.87)	14
Bond payments received (total amount $9,667.10)	95

STREET DEDICATIONS AND CHANGES

The numerous actions taken by the City during the year with reference to subdivisions, street grades, sidewalk widths and street closings were based on investigations and recommendations of the Bureau of Engineering and in many cases involved preparation of specific descriptions by the Survey and Mapping Division of the Bureau.

SUBDIVISION MAPS

The following tentative subdivision map was received and reported on:

Midtown Terrace Subdivision No. 5

Two subdivision maps approved by the City Engineer and Director of Public Works and filed in the office of the Recorder were:

Midtown Terrace Subdivision No. 3
Wildwood Park Subdivision

The following Record of Survey Maps were approved by the City Engineer and Director of Public Works and filed in the office of the Recorder:

Portions of Blocks 6327, 6328, and 6331
Portions of Blocks 2992, and 2993, Sherwood Heights Subdivision.

STREET OPENINGS

Maps approved and recorded, providing for the opening, widening or extension of streets were as follows:

Wildwood Way	120 feet westerly of Faxon to its westerly termination	Extension
Homewood Court	Wildwood Way to its northerly termination	Opening
Garden Street	From East Line Broderick 35 feet easterly	Widening
Dorman and Palou	Intersection	Widening
Mangels	Burnside Avenue to Hamerton Avenue	Widening

STREETS VACATED

Bancroft Avenue	Between Ingalls Street and Hawes Street
School Alley	Westerly 20 feet
Funston Avenue	Southerly of Ulloa Street
Cosgrove Street	From 97 feet 6 inches Westerly of Mason Street to its Westerly termination
Burnett Avenue	Portions of Burnett from Portola Drive to Northerly of Glenview Drive
Fern Street	Between Laguna Street and Octavia Street
La Grande Avenue Bacon Street and Buell Street	Portions of, near intersections of, Bacon Street, Buell Street and La Grande Avenue
Alabama Street	Portion of; between Alameda Street and Channel Street
Channel Street	Portion of; between Harrison and Florida Street

19th Street	Portions of; between Rhode Island Street and De Haro Street

STREET GRADES ESTABLISHED

Mercy Street	From 24th Street to 257 feet northerly

STREET GRADES CHANGED

Mangels Avenue	Between Baden Avenue and Hamerton Avenue
Broadway	At Fillmore Street and at Webster Street

SIDEWALK WIDTHS CHANGED

Morris Street	Between its Southeasterly termination and 134 feet northwesterly
Cabrillo Street	Between Funston Avenue and 14th Avenue
Balboa Street	Between Funston Avenue and 14th Avenue
Anza Street	Between Funston Avenue and 14th Avenue
California Street	Between Funston Avenue and 14th Avenue
Northerly Side Fulton Street	Between Funston Avenue and 14th Avenue
Clement Street	Between Funston Avenue and 14th Avenue
14th Street	Between Guerrero Street and Market Street
Montcalm Street	Between Mullen Avenue and Macedonia Street

SURVEYS AND MAPPING

The Division of Surveys and Mapping employed five field parties in the last year, with one additional field party added for the last four months of the year. Six men were employed in the office for the first six months of the year and seven men for the latter six months of the year.

NUMBER OF SURVEYS

A total of 235 separate surveys were undertaken as follows:

Public Improvement Surveys		
Public and Private Contracts	53	
City Pay Contracts	177	230
Lot Surveys		
For City Architect		5
Total Number of Surveys		235
Survey fees received during the year amounted to		$15,820.00

SURVEY MILEAGE

Survey lines run are segregated by type of work as follows:

TYPE OF SURVEY	MILES
Lots	1.3
Sewers	13.4
Cross Sections	34.4
Surveys in Slide Areas	2.0
Subsidence	6.8
Monument Lines	7.6
Topography	9.0
New Streets	3.1
Line and Grade for Curb and Paving	49.6
Track Removal	4.2
Reference Survey Cuts	8.4
Total Length of Surveys Run	139.8

PRECISE LEVEL SURVEYS

Precise level bench marks set during the past year were 65 Subsidence points established for the Candlestick Sewer Tunne amounted to 192.

OFFICE WORK

Maps prepared by the Division of Surveys and Mapping were as follows:

Civic Center Exhibit Hall Site	Topography
Civic Center Exhibit Hall Site	Horizontal Control
Log Cabin Ranch Recreation Hall Site	Topography
Larson Square Playground	Topography
Madison School Extension	Boundary & Topography
Starr King School Extension	Boundary & Topography
Fire House Engine No. 13 Site	Boundary & Topography
Stonestown Library Site	Boundary & Topography

Computations, preliminary drawings and deed descriptions for the acquisition of property were made for numerous projects, some of which were Market Street Widening, Portola Drive, Municipal Asphalt Plant, 26th Street Widening, 16th Street Widening, Clarendon Avenue Widening, Southeast Collection Sewer Easement and Christmas Tree Point.

Two final subdivision maps and two Record of Survey Maps submitted for filing in the Public Records were checked for correctness of lot line dimensions and exterior boundaries and filed in the the Office of the Recorder.

Thirty-nine requests from the City Attorney's Office to determine the City's interest in property involved and to check the boundary descriptions in actions to quiet title were reported on.

Twelve appeals from decisions of the City Planning Commission were checked to determine whether the signatures represented at least twenty percent of the owners within a radius of 300 feet of the property involved so as to qualify for consideration by the Board of Supervisors.

STREET AND SIDEWALK INSPECTION

A staff of six inspectors was employed during the fiscal year 1955 - 1956 under the direction of an assistant engineer on supervision of street excavations, inspection of sidewalks, and reports and investigations in connection therewith. On the average, two inspectors were engaged continuously on sidewalk inspections.

In addition, many special sidewalk and driveway inspections were made in connection with the various track removal and pavement reconstruction contracts and with the Department's street resurfacing program in widely scattered locations throughout the city.

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Combining sidewalk inspection with pavement improvement results in securing a completely renovated street from property line to property line. The combined coverage of all sidewalk inspections totalled 39,810 lot frontages.

Efforts were continued to secure needed new sidewalk construction in all districts and as a result of this activity 252,657 square feet of new walks were installed during the fiscal year by the responsible property owners.

A recently added activity of this Section is the implementation of Defective Sidewalk Repair Ordinance No. 9046.

This Ordinance provides that the Department of Public Works shall repair a defective sidewalk in cases where the owner, upon notification, has failed and neglected to do so. The cost of the repair is an obligation owed to the City by the owner of the adjacent property and secured by a lien on the lot in the event the amount due is not paid.

This Section has prepared the necessary forms and records and is making the follow-up on each step of the notification and repair procedure.

Funds for this work have been provided by the Delinquent Sidewalk Repair Revolving Fund to cover the cost of making the repairs and the fund is replenished by all monies paid or collected for the sidewalk repairs made.

Various street maintenance inspections and permit investigations were made by four inspectors, the major type being utility excavations, tank installations, driveways, construction use of street space, pavement defects, house movings, blasting, and complaint and claims investigations. Activities are illustrated by the following summary:

TABLE III

INSPECTIONS, NOTICES, PERMITS AND INVESTIGATIONS

Curb lowering permits and inspections	1,217
Preliminary Sidewalk repair notices, served	10,242
Formal Notices to construct or repair sidewalks	2,865
Notices to remove obstructions, oil, etc.	1,381
Notices to replace side sewer covers	1,732

TABLE III - Continued

Street Space permits and inspections	3,405
Sidewalk tank excavation permits and inspections	242
House moving permits and inspections	51
Defects in pavements reports (written)	2,029
Damaged signs reported	533
Excavation permits approved	12,987
Excavation repaving inspected	3,183
Posting Notices of Improvements	1,612
State Encroachment Permits obtained	48
Asphalt samples for analysis	12
Claims investigations and inspections	536
Special investigations	3,651
Correspondence answered	588
Personal and telephone calls of complaints or for information	18,119
Citations	36
Building Permit driveway plans checked	553

DAMAGE CLAIMS

The Bureau investigated 198 damage claims which had been iled against the Department of Public Works during the fiscal year 955 - 1956. All were based on accidents, usually falls, which ocured on streets or sidewalks. They were classified as to cause as ollows:

45 due to Contractors' operations
13 due to construction work by utilities
35 due to street conditions
83 occurred on sidewalks
10 occurred in bus zones
10 involved property damage of various types to automobiles, buildings, etc.
2 unimproved land

Of the 198 claims, 139 were falls by pedestrians of which 117 were females and 22 were males.

Under present law, damages due to defective pavements or sidewalks is the responsibility of the Department of Public Works, i negligence in making repairs can be shown. A full report on each claim was made for the City Attorney, accompanied by photographs when appropriate.

LANDSLIDE CORRECTION

GENERAL

The annual rainfall in San Francisco, as recorded by the Federal Weather Bureau from June 30, 1955 to July 1, 1956 amounted to 26.84 inches. Unusually heavy precipitation occurred during December 1955 and January 1956, with a concentration of rainfall of 4.21 inches between December 21st and 24th inclusive, a total for December of 11.4 inches and 4.7 inches of rainfall between January 13th to 15th inclusive, and a total for January of 8.72 inches.

This abnormal rainfall is reflected in the numerous slides that occurred throughout the City during the winter, many of which were on private property such as those at the following locations which were referred to the Bureau by the property owners or came to our attention when the slide encroached on a street:

Corner of Canyon Drive and South Hill Boulevard
North side Silver Avenue west of Cambridge Street
Foote Street near Cayuga Avenue
Greenwich Street between Montgomery and Sansome Streets
West side of Brussels Street near Goettingen Street
Teddy Street near Alpha Street
Adjacent to Majestic Avenue near Lakeview Avenue
Montgomery Street at Lombard Street
Miguel Street near Beacon Street
Mountain Springs Avenue near Twin Peaks Boulevard
Del Vale Street near O'Shaughnessy Boulevard
Harkness Avenue west of Bishop Street

Investigations and reports were made of these and other slides many of which were on private property and of the type resulting from the removal of lateral support by adjoining property owners

In such cases the owners were informed of their responsibility and advised to settle the matter privately. Others occurred because of uncompacted fill placed on steep slopes which became saturated by the heavy rains.

In addition, several slides on City property, which have received attention during the past few years, were regenerated during the winter. These were:

El Camino Del Mar

The easterly slide which first moved in 1923 shortly after the roadway embankment was built, started moving at an accelerated rate after the December rains and the temporary roadway, which included new drainage works and which was opened to traffic in the first week of October 1955, was again closed to traffic late in January 1956. At the end of the fiscal year, a study was under way for bridging the bedrock gully since further efforts and expense to maintain the embankment could not be justified.

The relatively stable westerly slide also started moving perceptibly in December but additional remedial measures were not urgent.

Bret Harte School - Ingerson Avenue Slide

Continuing observation indicated only minor movement prior to the heavy winter rains which reactivated the slide causing abandonment of two dwellings and extensive damage to the drainage works. Plans were started for additional drains to be built before next winter.

Parker Avenue

The continued minor movement accelerated, but not seriously, during the winter and only minor pavement and curb repairs were needed. However, it was still recommended that building permits for the lots west of the slide area be refused.

Several new slides developed on City property during the winter. Among these were:

Bache Street South of Benton Avenue

This slide resulted from the saturation of old fill and top soil which became semi-liquid, moved down the slope and lodged against two units of the Alemany Housing Project. The San Francisco Housing Authority evacuated two units. Plans were started for rebuilding the slope with compacted fill, for a bin wall near the top and for some drainage work.

Grand View Avenue (formerly Burnham Street) between 24th and 25th Streets

The slide between Elizabeth and 24th Streets that was remedied by a drainage system in 1942 remained entirely stable. However, the heavy rains caused movement between 24th and 25th Streets. The east curb moved slightly away from the pavement and three adjacent new homes showed evidence of settlement. Plans were started for vertical drain shafts served by a drain extending southerly from 24th Street to stabilize Grand View Avenue.

Alemany at Trumbull

Saturation of the backyard fill and underlying windblown sand stratum on top of the rock cut on the north side of Alemany Blvd. opposite Trumbull Street caused a small slide to the boulevard.

Twin Peaks Boulevard

On the north side of Twin Peaks Blvd. just west of Panorama Drive the cut slope, burdened by the subdivision fill on the south side of Panorama Drive and saturated by the rains, slid and upheaved the sidewalk and a few feet of the adjacent pavement. Unloading of the slope or other remedial measures were under consideration.

San Jose Avenue (Bernal Cut)

Absorption of rainfall by top soil over the unprotected cut slope at several points resulted in several minor superficial slides. The previously gunited slope areas were not affected.

Charter Oak at Helena

In grading to the end of Charter Oak Street the blasting of the rock mass shattered it beyond the limit of excavation. Penetration of water along fractures promoted the fall of rock blocks between them. This will be a recurrent matter with heavy rainfall until all fractured rock falls from the mass.

Helena Street, East of Elmira Street

Loose fill material became saturated and flowed against a corrugated metal building. A surface drain dug at the concrete foundations appears to be drying out and stabilizing the material.

Greenwich Street between Montgomery and Sansome Streets

Due to the prior excavation at the site of an old quarry for additional construction in private property to the north, and the heavy rainfall of the past winter, a mass of rock and overburden including part of the north side of unimproved Greenwich Street slid down the steep bank causing some damage to the property below. The board walk in Greenwich Street was dislodged but the slide did not extend to the sewer. The City Attorney ruled that the damage was the responsibility of the property owner whose excavation caused the slide and the latter was so notified.

TRAFFIC ENGINEERING

ADMINISTRATION

While no change was made in traffic administration during the year, a survey of traffic administration in San Francisco was undertaken for the Board of Supervisors by the Automotive Safety Foundation, a non-profit organization that does research in the field of traffic administration and vehicle performance and also promotes safety and better highways. Its staff has been gathering and analyzing data and has presented interim reports. The final report and recommendation is expected in the latter part of 1956.

TRAFFIC SIGNS

Because of increasing costs of installing and maintaining traffic signs, a revised contract was made by the Department of Public Works with the California State Automobile Association which handles these signs in San Francisco. Previously, the cost of new signs and appurtenances was paid by the City and all labor and installation costs were borne by the Automobile Association. Under the new contract, $15,000 a year is paid to the Association to cover the cost of labor, trucking and installation.

Two new types of guide signs were added during the year. In a test area, which included Market Street and the area adjacent on the south, new green and white "Scotchlite" signs were installed. These direct people either to the Central Skyway or to the San Francisco Bay Bridge. This type of directional sign has been sorely needed in San Francisco in recent years for the benefit of out-of-town motorists. The green and white coloration, differing from the normal black and white, is in use in a few other California cities as a guide sign to freeways only and the eye-catching color scheme should prove helpful. The north of Market area is now being surveyed for an extension of this program.

After some delay, the blue, white and orange seagull signs denoting San Francisco's famous "49 Mile Scenic Drive" were finally installed. The route which has been adjusted to take in some of the newer additions to the city's scenic wonders takes the motorist past locations which feature some of the most beautiful views in the world. Originally established and maintained by the Downtown Association prior to the opening of the San Francisco World's Fair in 1939, its length, 49 miles, has a historic connotation in regard to the Gold Rush days of '49. The new sign, chosen in a contest held by the Association, has been installed and will be maintained by the City.

TRAFFIC PLANNING

Traffic planning, which not too many years ago was virtuall neglected, has become a major function. Preliminary study in the planning stages of projects, will bring a many fold reward in later years through the reduction of traffic congestion, accidents and the need for expensive remedial measures. Below is a partial list of projects exclusive of parking and freeway planning reports for which the Traffic Engineering Division has either made studies and reports or has been consulted and has given advice in regard to traffic:

Crown Zellerback Building
Ferry Building Park
Civilian Defense Evacuation Plan
U. S. Medical Center
Diamond Heights Redevelopment
Malone Transit Plan
Starr Transit Plan
Civic Center Exhibit Hall
South Basin Produce Area
Produce Area Redevelopment Plan
Seventh Street Extension Project
Thirteenth Street Widening
Various Subdivision Street Layouts
Market Street-Portola Drive Widening

In regard to the Market Street Widening Project, a uniqu method (for San Francisco) of routing traffic will be followed. Th Contractor will be able to maintain two lanes for traffic at all times While this will be adequate for off-peak hours, traffic volumes o upper Market Street are heavy enough during peak hours to requir two lanes in the peak direction of travel. In order to avoid detourin heavy peak hour volumes over residential streets and clogging othe already congested arteries and taking commuter traffic long distance from their desired travel paths, it was decided to make upper Marke Street a reversible one-way street in the peak hours between Corbet Street and Ord Street. This would provide the needed two lanes fo the major direction of travel and would re-route the relatively smal opposing flow during the peak hours over Corbett Avenue in the morning peak period and Clipper Street in the evening peak period.

PARKING

Only one new parking report was made last year - - the Freeway Area Fringe Parking Study - - however, additional studies and supplementary reports were issued on the following parking problems:

Sutter-Stockton Garage

Fifth and Mission Garage

Howard-Natoma Parking Lot

Mechanical Parking Garages

Civic Center Garage

Analysis of 10¢ per hour parking meter fee

Study on electric eye unit to limit parking meter usage.

A Freeway Fringe Parking Survey was made by the Traffic Division for the Parking Authority to determine the possible patronage and income of a parking lot beneath the Central Skyway between Fifth and Eighth Streets. This fringe lot would have been served by Municipal Railway shuttle busses travelling between Market Street and the fringe area. Since it dealt with many unknown factors into which no research has been made, the survey required considerable deduction and assumptions. The final report indicated that the lot would probably make a profit. However, other factors intervened and the proposal was shelved.

FREEWAYS AND BRIDGES

Reports on design features, location and estimated traffic have been prepared for the following freeways and bridges:

The Southern Freeway

Southern Crossing

Embarcadero Freeway

Western Freeway

San Francisco - Tiburon Bridge

The study which consumed most effort is the hotly disputed Western Freeway which would connect the western portions of San Francisco and northern San Mateo County with the Golden Gate Bridge and the central business district. Many design features were proposed including reversible peak hour lanes, somewhat on the order of those used in Chicago's Lakeshore Drive. An analysis of origin and destination data indicated that over 95% of the traffic on the Western Freeway would have origins or destinations in San Francisco. This is contrary to the assertion that the freeway would be merely a convenient connection through San Francisco for motorists going between Marin County and San Mateo County.

PUBLIC RELATIONS

With an increase in public hearings on street improvements much time was devoted to preparation and attendance. In addition many appearances were made before merchant and improvement clubs, public service groups and professional and educational organizations. In addition, innumerable contacts have been made in the giving out of information by telephone or at the office.

RUNAWAY VEHICLE STUDY

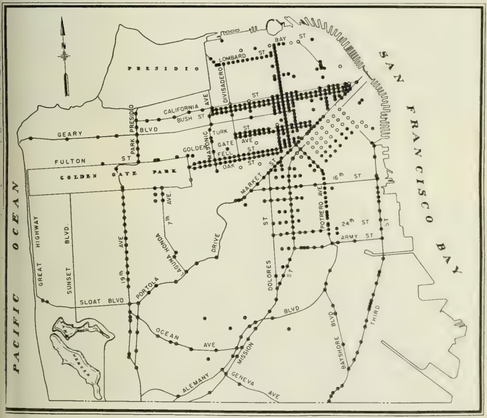
As an aftermath of a tragic truck runaway on Clay Street which took the lives of seven people, there was a demand for a solution of the runaway vehicle problem in San Francisco. The Department of Public Works undertook a study at the request of the Board of Supervisors concerned only with runaway parked vehicles. It was found that an average of two runaway parked vehicle accidents occur each day in San Francisco but that they are very widely distributed with only three blocks in the whole city averaging three runaways per year while 115 average one or more a year. The great spread of the accidents indicated that if a campaign were to be effective, it must mainly be an educational and enforcement program with engineering treatment on only the high accident locations. In the report, treatment was recommended for 55 high accident locations with the treatment including painting parking stalls, installing educational signs, raising low curbs, installing 90 degree parking and prohibiting parking in some cases. The three-phase program of education through publicity, stricter enforcement of parking laws and engineering treatment was accepted in principle by the Police Department, the Department of Public Works and the National Safety Council and is expected to be put in effect.

TRAFFIC SIGNALS

Three major signal installation contracts totalling approximately $160,000 were let in the 1955-56 fiscal year. In addition three other minor contracts providing for a replacement of parts minor signal modification and illuminated traffic sign installations were also let.

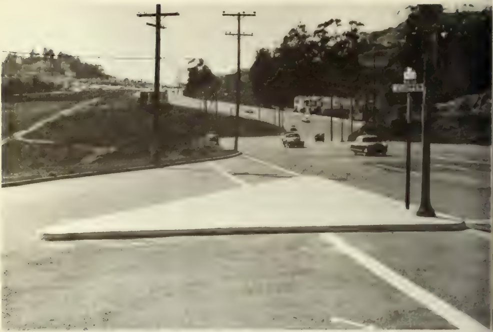
The largest of the contracts, the $72,750 First South of Market Signal Contract, provided for the replacement of the antiquated Wiley signals in the south of Market area between Third and Ninth Streets with modern flexible three-dial fixed time controllers. This replacement has already resulted in a noticeable improvement in traffic movement including that of the Municipal Railway busses on Mission Street and a reduction in a very high accident rate in the south of Market area. Various changes were made in existing signals in the $46,400 Modification Contract No. 2, some additional intersections on Bay Street were signalized and the whole Bay Street system was removed from the Van Ness Avenue master controller and put under supervision of its own master controller. This will permit adjustment of the Bay Street signals to take care of the heavy week-end volumes that use this artery. Isolated Signal Contract 14 covered the installation of signals at high accident intersections.

THREE LIGHT TRAFFIC SIGNAL INSTALLATIONS

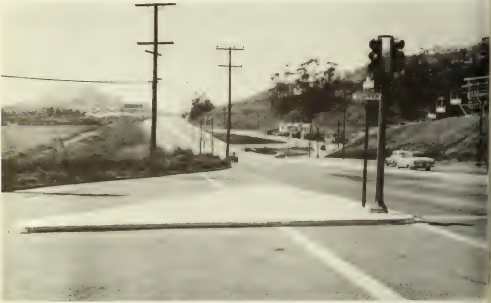


3-LIGHT TRAFFIC SIGNAL INSTALLATIONS
AWARDED 1955-1956 ○
AWARDED PREVIOUSLY ●

Fig. 5



PORTOLA DRIVE
Woodside Avenue to Corbett Avenue
Before Realignment and Construction



PORTOLA DRIVE
Woodside Avenue to Corbett Avenue
After Realignment and Construction

LINCOLN WAY AT KEZAR DRIVE
Showing Multiple Left Turn
Lanes and Pavement Bars

PROPOSED PARKING GARAGE
Fifth and Mission Streets

TABLE IV

TRAFFIC FACILITIES AND IMPROVEMENTS

	COMPLETED 1955-1956	APPROXIMATE COST 1955-1956	NUMBER IN PLACE 6-30-56
SIGNALIZED INTERSECTIONS			
Wiley Type Signals Replaced	33		
3-Light Installations	86		545
Net Increase	53		
Wiley Type Signals Existing			55
Total Signals			600
Equipped with Pedestrian Signals	3		142
Actuated Signals Added	3		140
TRAFFIC SIGNS			
Parking Signs Installed	541		
Other Signs Installed	977		
Other Signs replaced	53		
Total	1,571		
Stop Signs Added	219		
Stop Signs Replaced	8		
Total Cost		$ 12,600	
In Addition, the City spent $25,000 for installation services			
STREET NAME SIGNS			
Old type street signs replaced with new type	102	3,000	7,480
New type street signs installed	154	6,400	
Street signs repaired	2,100	17,100	
Total Cost		26,500	

TABLE IV - continued

	COMPLETED 1955-1956	APPROXIMATE COST 1955-1956	NUMBER IN PLACE 6-30-56
PARKING METERS			
New Installations	75	2,600	12,629
Maintenance Changes	1,000		
Relocations	200	1,500	
Total Cost		4,100	
TRAFFIC PAVEMENT PAINTING			
Standard Striping, Miles	376.7	40,500	
12-Inch Stripes, Miles	128.0	80,500	
Pavement Words (cost included in other items)	10,138		
Bus Zones	1,511	11,900	
Parking Stalls (all types)	7,041	5,400	
Total Cost		138,300	
New School Intersections	7		763
CHANNELIZED INTERSECTIONS			
Concrete Islands	3		
Raised Pavement Bar Islands	9		
Total	12		
DIVIDED ROADWAYS			
Concrete Center Island, Miles	0.92		
Painted Center Island, Miles	1.13		

SEWERAGE SYSTEM

GENERAL

Planning, design, and construction of essential replacement and extensions of storm and sanitary systems, collecting sewers including pumping stations, and improvements at the three sewag treatment plants proceeded under the sewer bonds program.

FUNDS

Sewer and Pumping Station contracts awarded chargeable against Sewer Bonds were as follows:

Sewer replacements and extensions	$ 840,000
Collecting Sewers and Pumping Station	335,000
Sewers in Street Reconstruction, Widening and Track Removal Contracts	125,000
Total	$1,300,000

The balances remaining at the close of the fiscal year were:

	Bond Issue	Approximate Balance
1933 Sewer Bonds	$ 2,625,000	$ 17,000
1944 Sewer Bonds	12,000,000	746,000
1948 Sewage Treatment Bonds	15,000,000	532,000
1954 Sewer Bonds	12,645,000	10,853,000

STORM AND SANITARY SEWER CONSTRUCTION

A number of storm and sanitary sewer projects necessary t relieve flooding, to extend the sewer system, and to make emergenc replacements due to sewer breaks caused by the heavy winter rain were started.

Some of the more important projects are described briefl below.

Lincoln Way Sewer - Section "A" and "B"

The Lincoln Way System is an auxiliary sewer in the north side of Lincoln Way from 7th Avenue to 48th Avenue, designed to relieve the old Lincoln Way Sewer which is inadequate, as demonstrated by dozens of complaints of flooding and storm water spouting from manholes observed over the last 15 years in Lincoln Way and adjacent streets.

Section "A", extending from 39th Avenue to 48th Avenue, contract cost $198,839, consists of 80 lin. feet of 6' - 3" diameter monolithic reinforced concrete sewer, and 2700 lin. feet of spun reinforced concrete pipe, 45" to 75" diameter. This unit, which is

LINCOLN WAY SEWER
at 43rd Avenue

almost completed, relieves the 48th Avenue sewer by a redistribution of storm flow at 48th Avenue and Lincoln Way in such a manner as to increase the overflow into the Lincoln Way Storm Outlet.

Section "B", also under construction, contract cost $211,483 extends from Sunset Boulevard to 29th Avenue, and consists of 316 lin. feet of 6' - 6" and 6' - 0" diameter monolithic reinforced concrete sewer and 2,080 lin. feet of 33" to 72" diameter spun reinforced concrete pipe.

Both sections of this sewer were still under construction at the close of the fiscal year.

Other units will be constructed at a later date when the effect of these two units upon the flow in the area can be determined.

CANDLESTICK POINT TUNNEL
Safety Niche

Glen Canyon Sewer

The Glen Canyon Sewer was designed to take care of the contributary flow of the canyon from Portola Drive to Glen Park, including flows from the projected Diamond Heights Redevelopment Project. This sewer will permit abandonment of the temporary La Place Canyon Sewage Pumping Station at Portola Drive and will eliminate intermittent overflows of sewage into the creek in Glen Canyon.

The contract, awarded at a cost of $113,334, includes 55 lin. feet of 4' - 0" diameter monolithic reinforced concrete sewer, 1,820 lin. feet of spun reinforced concrete sewer and 1,700 lin. feet of V.C.P. sewer on reinforced concrete foundation.

Stanley Sanitary Sewer Through State College Grounds

A low bid of $22,755 was received for relocating a section of the existing Stanley Sanitary Sewer in the San Francisco State College grounds to permit the construction of a building. The size of the sewer was increased to provide for the future flow.

An arrangement was made with the State whereby it will pay for all the relocation cost except that portion representing the increase in capacity, the latter portion being paid for by the City. The State's share is 52% of the total cost.

The contract had not been awarded at the close of the fiscal year due to the time needed in processing the agreement with the State.

Emergency Sewer Break Repairs

Because of the heavy and continual winter rains, undermining of streets and collapse of sewers occurred in many places, two of which were of such magnitude as to require emergency contracts, and one of such urgency as to require a major departmental repair job.

In Union Street a cave-in occurred west of Polk Street requiring award of an emergency contract for construction of 15" diameter V.C.P. sewer on reinforced concrete foundation for 230 lin. feet westward from the center of Polk Street at a contract cost of $9,350. The new sewer was constructed at a higher level than the old sewer, which was at an excessive depth and was abandoned.

In Scott Street southerly from the south line of Lombard Street several sewer breaks occurred causing collapse of the sewer and caving of the street. An emergency contract was awarded for construction of 160 lin. feet of 27" diameter V.C.P. sewer on reinforced oncrete foundation at a contract cost of $7,540.00.

The Bureau of Sewer Repair later replaced an additional lengt of the old Scott Street sewer from the south line of Lombard Stree northward for 50 feet to the intersection with the Lombard Stree sewer.

In Larkin Street south of Post Street, the collapse of an overloaded 3' x 5' brick sewer caused a 50 ft. cave-in of the street. Th magnitude of the collapse and the danger of further caving, cause by heavy flow in the sewer, called for immediate action. 60 lin. fee of 42" diameter corrugated culvert pipe and coupling bands wer purchased by the City and the emergency installation made by th Bureau of Sewer Repair. A permanent larger sewer is planned t replace the existing remaining section of inadequate brick sewer an the temporary corrugated metal pipe sewer.

Sewers in Street Projects

The following street reconstruction, channelization, and trac removal projects included sewer work totalling approximatel $125,000. All were V.C.P. sewers:

Great Highway and Lincoln Way Channelization

Oak Grove Street Reconstruction: Harrison-Bryant St.

California Street Track Removal: Van Ness to Walnut
  5 blocks of sewers constructed

13th St. Widening: South Van Ness to Bryant Street

Stockton St. Track Removal: Market St. to Columbus Ave.

O'Farrell St. Track Removal: Market St. to Jones St.

COLLECTING SEWER CONSTRUCTION

Yosemite Pump Station and Related Sewers

A contract was awarded to construct the Yosemite Pumpin Station, Diversion Structure, and Force Main, known as Southeas Collecting Sewer Sections G-1, G-2 and G-3 at a contract cost o $335,440. This project is a part of the Southeast Collecting Sewe System.

The pumping station is designed to pump an average daily flo of 5 m.g.d. and a maximum flow of 13 m.g.d., consisting of flo from approximately 1500 acres. The sewage is pumped from Yosemite Avenue and Ingalls Street through 1100 feet of 20-inch mechanica joint pipe to Thomas Street and Ingalls Avenue from where it flow by gravity to the Southeast Treatment Plant.

North Point Collecting Sewers - Section A

A contract was awarded for $252,694 for the North Point Collecting Sewers Section "A", consisting of 1050 lin. feet of monolithic reinforced concrete sewers on piles, 830 lin. feet of encased V.C.P. sewers on piles, and 1520 lin. feet of V.C.P. sewers.

These sewers are in the area bounded by Battery Street, Vallejo Street, and The Embarcadero and are combined sewers conveying sanitary sewage by gravity to the North Point Main in Sansome Street at Greenwich Street, from whence the sewage flows by gravity to the North Point Sewage Treatment Plant.

A contract was also awarded for $27,685 for the North Point Collecting System diversion structures at 10th and Harrison Streets and on Howard at 5th Street and at 7th Street. This project was completed during the fiscal year.

Collecting sewer projects on which construction was started last fiscal year and completed this fiscal year include the following:

Ingalls Street Sewer
Fitzgerald Pumping Station

In addition, construction continued through the year on the Southeast Sewage System Candlestick Point Tunnel Sewer.

SEWAGE TREATMENT PLANTS
ADDITIONS AND BETTERMENTS CONSTRUCTION

Contracts totaling $41,700 were awarded during the year for additions and betterments to the Richmond-Sunset, Southeast and North Point Sewage Treatment Plants. These projects were:

Project	Contract Account
Southeast Sewage Treatment Plant - Additions and Betterments Installation of a Mud and Eductor Pump, Piping and Related Appurtenances	$ 2,697.
Southeast Sewage Treatment Plant Stairs, Handrails, Ladders, etc.	17,170.
Richmond Sunset Sewage Treatment Plant Additions and Betterments - Sludge Pumps, Gas Compressor, Gas Meters, etc.	13,967.
North Point Sewage Treatment Plant Additions and Betterments - Resurfacing Concrete Floors, Piping and Misc. Work	7,855.

PLANNING

Storm and Sanitary Sewers

Preparation of contract plans for storm sewers in order to prevent flooding, and to serve new areas and tidelands, continued and the following jobs are scheduled for advertising during the coming fiscal year:

	Estimated Project Cost
Lake Street Sewer - 6th Avenue to 8th Avenue	$ 50,000
Anza - Geary Auxiliary Sewer This will relieve flooding in the vicinity of Fifth Avenue and Geary Boulevard	300,000
Division Street Relief Sewer This will give added capacity to the Division outfall which diverts storm flow from the North Point main, and will relieve flooding in the vicinity of Fourteenth and Harrison Streets	800,000
Lake Street Sewer - Section D This sewer will complete the Lake Street Sewer System, and consists of an enlargement of sewers in Arguello Boulevard from Geary Boulevard to McAllister Street	170,000
Portola Drive Widening, Sewer Replacements and Enlargements. In connection with other highway, channelization, street improvement and track removal projects, existing sewers will be enlarged, replaced, or altered, as necessary.	200,000

Collecting Sewers

Progress continued on the design of North Point and Southeas Sewerage Collecting System under the program for cleaning up th Bay waters in conformity with State requirements and the followin work is scheduled for advertising during the coming year:

	Estimated Project Cost
North Point Collecting Sewers Jackson-Commercial Streets District Sections B-1, B-2 and B-3	$1,480,000
Southeast Collecting Sewers Rankin St. Outlet & Intercepting Sewer	100,000

		Estimated Project Cost
Southeast Collecting Sewers		
Sunnydale Diversion Structure	(H-1)	
Candlestick Diversion Structure	(H-2)	
Candlestick Intercepting Sewers	(H-3)	350,000

The construction of the Southeast Collecting Sewer System Section H, which may go to contract within the next fiscal year, will complete the major units of the Southeast Sewer System whereby the sanitary flowfrom all major outfalls in this district will be diverted to the Southeast Sewage Treatment Plant leaving only isolated, relatively small discharges remaining to be collected.

Sewage Treatment Plants - Additions and Betterments

Plans were under preparation for further additions and betterments at the three sewage treatment plants, and the following projects, estimated to cost some $250,000, are scheduled for advertising during the next fiscal year:

Southeast Sewage Treatment Plant:

Provisions for Storage Areas and Related Facilities

Ventilation - Receiving and Thick. Bldg., and Headworks Bldg.

Digester Gas and Recirculating Lines

North Point Sewage Treatment Plant:

Facilities for Administration Bldg., Machinery Guards, Platform for Servicing Crane, Rein. Gratings in Pre-Treatment Bldg.

Standby Pumps for Pre-Treatment Bldg. Sand Pumps

Overflow Structure Pumps

Concrete Blocks, Partition Walls in Sedimentation Building

Galvanizing 32,500 lin. ft. of Walkway Handrails around Tank and other Misc. Iron Works

Repair Exhaust Air Ducts in Pre-Treatment and Sedimentation Buildings

Richmond-Sunset Sewage Treatment Plant:

Additional Grit Handling Facilities - Phase I

Laboratory and Office Space Revision

Repair Windows in Administration and Pre-Treatment Buildings

Miscellaneous

In addition, many investigations were made as to the causes of flooding occasioned by the heavy rainfall. The sewer plans of subdivisions and housing projects were reviewed before approval.

The Bureau also continued the preparation of maps together with the necessary field surveys locating the industries throughout the City in cooperation with the Bureau of Sewer Repair and Sewage Treatment in connection with the enforcement of the industrial waste provisions of Ordinances Nos. 7988 and 7425, which are administered by the Department. Various engineering studies of types of separators and other devices for which standards are to be developed were also made in conjunction with this program.

LABORATORY AND TESTING

The testing laboratory was operated as a unit of the Division of Construction to check the quality of materials used on construction projects and to control the asphalt and concrete mixes used in pavements and structures. In addition many tests were made for the Purchaser of Supplies, the Bureau of Architecture, the Public Utilities Commission, the Fire Department and the Recreation and Park Department.

CONCRETE

Concrete samples taken at construction projects at time concrete was being placed were transported for proper storage to the laboratory. The samples were capped and tested at seven and twenty-eight days. All samples continued to test well above specifications.

The use of Calcium Chloride to accelerate the setting of concrete was continued to permit the early movement of traffic over new pavements and parking strips.

LIGHT WEIGHT CONCRETE

18th Street Viaduct between Iowa and Minnesota Streets.

The decking on this viaduct was replaced with reinforced precast light weight aggregate concrete slabs. The specifications called for a mortar topping of cement and Top Sand to serve as a wearing surface.

It was the opinion of the laboratory that this topping was not necessary as the light weight aggregate if properly placed would yield a superior wearing surface while holding the weight of the slabs to a minimum.

A trial block was cast and a very satisfactory surface obtained by holding the workable slump at a minimum to prevent the light weight aggregate from floating to the surface. The surface of the slab was trowelled and broom finished. This procedure resulted in a very satisfactory non-skid wearing surface and the balance of the slabs were cast and finished in this manner.

ASPHALT

Asphalt mixes supplied by the various local Asphalt Plants have been satisfactory and due to the mild climatic conditions at the time of placement very little trouble was experienced.

The play yard of the Herbert Hoover Junior High School was paved with sheet asphalt, using 85 - 100 penetration asphalt to a thickness of one and one-half inches. Within a week after this yard was paved a series of very hot days followed. The surface softened to the point where the soles of the children's shoes left imprints and the painted lines of the play courts were distorted.

It was the opinion of the laboratory that the 85 - 100 penetration asphalt used had set too slowly and was not thoroughly and properly cured to prevent distortion. It was recommended that 50 - 60 penetration asphalt be used in all future sheet asphalt yard pavements.

SUMMARY OF TESTS PERFORMED

A summary of the tests performed in the laboratory during the year for various agencies, together with corresponding figures for the preceeding year, are shown in the following tables.

TABLE V

	1954-1955		1955-1956	
CHEMICAL AND PHYSICAL TESTS				
Public Utilities Commission	5		15	
Department of Public Works	75		125	
Purchaser of Supplies	150		175	
Fire Department	30		20	
Recreation and Park Department	25		15	
Bureau of Architecture	225		150	
Bureau of Engineering	25	535	20	520
AINT TESTS				
Recreation and Park Department	2		0	
Purchaser of Supplies	40		25	
Bureau of Architecture	28		20	
Public Utilities Commission	7	77	2	47

TABLE V - continued

	1954-1955		1955-1956	
ASPHALT AND COAL TAR TESTS				
Corporation Trenches	6		2	
Public Utilities Commission	30		5	
Recreation and Park Department	12		5	
Department of Public Works	120		100	
Bureau of Engineering	125	293	75	187
CONCRETE TESTS				
Recreation and Park Department	10		4	
Bureau of Architecture	620		280	
Public Utilities Commission	250		56	
Bureau of Engineering	330	1210	225	565
TOTAL		2115		1319

GARBAGE DISPOSAL

Garbage and refuse collected in San Francisco by the two licensed scavenger companies are disposed of by the Sanitary Fill Co., a corporation vested with an exclusive franchise from the City. Under the terms of this franchise, the City Engineer maintains constant inspection and determines the engineering practices employed in the operation of the disposal site.

SANITARY LAND FILL

The disposal site is located on Southern Pacific Railroad property in San Mateo County just south of the San Francisco City and County Line in the San Francisco Bay Tidelands as shown on Fig. 6.

The method of disposal is essentially a garbage fill with an earth cover. This method is unusually well suited to this location. Sandy clay and rock are available in nearby hills, and this cover material forms an excellent seal of the fill. The use of rocky material permits winter operation. The prevailing westerly offshore wind eliminates noticeable odors from the site. The reclamation of the tidelands benefits both the owners and the community.

The fill and cover operations have proven to be sanitary in all regards. There has been no offensive condition due to flies, vermin, odors or unsightly conditions. Underground fires in the fill are a rarity and have never been uncontrolled, since the daily earth covering in effect creates separate cells of garbage within the fill. Trash burning is limited to paper or woodwastes and takes place at locations isolated from the fill operations.

The first layer of fill has been completed in the area bounded by the Freeway fill and the access road as shown on Figure 6.

The second, third and fourth layers of garbage fill have yet to be placed before the filling operation is extended to Guadalupe Canal.

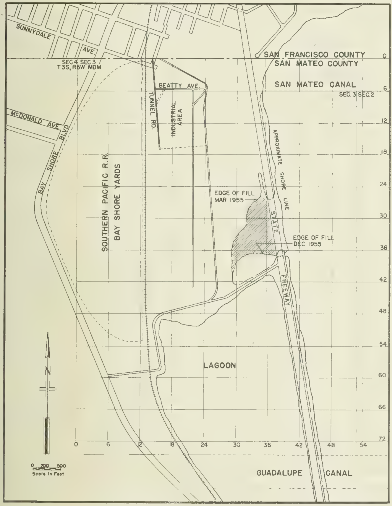


Fig. 6

ETTLEMENT OF THE FILL

The program of determining the settlement rates of the various ll layers was continued by the Bureau so as to permit the prediction rates of development and fill for the future years, by correlating e tons of garbage and cubic yards of cover material. The resulting olumes of fill may be measured in terms of weights of garbage and olume of cover material.

TABLE VI

GARBAGE COLLECTION AND DISPOSAL STATISTICS
Calendar Years 1954 and 1955

	1954	1955
GARBAGE COLLECTION		
Trucks used, average	145	*148
Trips per day	273	268
PAPER COLLECTION		
Flat-bed trucks used	27	29
Amount collected, tons	24,492	24,045
Amount salvaged, tons	16,320	19,463
Amount dumped, tons	8,172	4,582
INCOME OF SANITARY FILL CO.	$254,904	$276,660.73
FILL AND COVER EXPENSE		
Operations	$204,385	$214,707.70
Road and Maintenance	9,338	9,988.43
Administration and Inspection	47,220	52,414.54
Total Expense	$260,943	$277,110.67
GARBAGE AND REFUSE HANDLED		
City of San Francisco, tons	$264,975	$255,338.88
Other sources, tons	2,934	3,885.32
Total tons	267,909	259,224.20
Quantity per day tons (312 days)	859	831
Cost of disposal per ton	$ 0.974	$ 1.069
COVER MATERIAL		
Quantity used, cu. yards	217,760	215,480
Cost, total	$115,265	$124,438.20
Cost per cu. yd.	$ 0.531	$ 0.576
Quantity per ton of garbage and refuse	0.812 cu.yd.	0.832 u.y
Truckloads of Garbage and Refuse	85,052	83,322
Average Weight per Load, tons	3.15	3.11
Estimated Average Weight of Garbage per cu. yd. in pounds	351	346

* The above information was obtained from Easley & Brassy, Contractors of the Sanitary Fill Company.

SUMMARY: The benefits of this sanitary land fill operation are multifold. It is a sanitary method of disposal, economical, profitable to all parties concerned and results in the reclamation of the Tidelands.

ADMINISTRATION OF THE BUREAU

ORGANIZATION

The plan of organization of the Bureau as of June 30, 1956, is shown on the chart at the beginning of the report of this Bureau. It will be noted that there are two staff divisions and five line divisions under the direction of the City Engineer who heads the Bureau and reports to the Director of the Department. The Assistant City Engineer assists in general supervision and also acts as Head of the Division of Streets and Highways.

The persons who were in charge of each division, section and unit as of June 30, 1956, are shown in the following tabulation:

SUPERVISORY PERSONNEL

As of June 30, 1956

DIVISION, SECTION AND UNIT	PERSON IN CHARGE
DIVISION OF STREETS AND HIGHWAYS	C.J. Geertz, Asst. City Engr.
Street Improvement Section	E.J. Sierra, Engineer
Improvement Plans Unit	C.C. Clifton, Asst. Engr.
Assessment Unit	L.C. Whaley, Asst. Engr.
Permit and Inspection Unit	C.S. Hiden, Asst. Engr.
Plan and Record Unit	C.C. Clifton, Asst. Engr.
Highway Section	W.C. Ewing, Engineer
Track Removal Section	A. Goldberg, Engineer
DIVISION OF DESIGN	R.C. Levy, Senior Engineer
Administrative Section	G. Galli, Engineer
Structural Section	N.F. Yde, Engineer
Sewer Section	R.F. Lauenstein, Engineer
Sanitary and Special Projects	A.O. Friedland, Engineer
Mechanical Section	D. Matlock, Engineer
Electrical Section	S.I. Sandberg, Engineer

SUPERVISORY PERSONNEL - continued

Underground Structures Section	W.R. Daly, Senior Draftsman
Hydraulics Section	G.T. Jeong, Engineer
Specifications and Estimates	S.C. Gerughty, Engineer
DIVISION OF TRAFFIC ENGINEERING	R.T. Shoaf, Engineer
Administrative Section	Wm. Marconi, Asst. Engr.
Design Section	C.M. Lang, Asst. Engr.
Operation Section	M.L. Kermit, Asst. Engr.
Maintenance Section	J.E. Kenck, Asst. Engr.
DIVISION OF SURVEYS AND MAPPING	H.G. Louie, Engineer
DIVISION OF CONSTRUCTION	J.D. Roberts, Sr. Engineer
Testing Laboratory Unit	P.F. Bernard, Chemist
DIVISION OF CONTRACT ADMINISTRATION	J. Fiacsan, Engineer
DIVISION OF OFFICE MANAGEMENT	W.J. McKee, Head Clerk
Police Department Assignment Was assigned to the Police Department to assist the Director of Traffic.	J.L. Slater, Engineer

PERSONNEL AT BEGINNING AND END OF FISCAL YEAR

DIVISION	July 1 1955	June 30 1956	Change
Design and Administrative	109	115	+ 6
Construction (Field)	27	21	- 6
Surveys and Mapping (Field and Office)	24	29	+ 5
Traffic Engineering	22	22	0
General Clerical Staff	17	18	+ 1
TOTALS	199	205	+ 6

PAYROLL

The following tabulation shows the number of employees and total payrolls charged to General and Project Funds.

SOURCE OF PAYROLL FUNDS

	Employees End of Year	Payroll 1955-56
General Fund (Budget Payroll)	60	$ 369,722.
Project Funds - Gas Tax, Bonds, Etc. (Interdepartmental Payroll)	145	703,785.
TOTALS	205	$ 1,073,507.

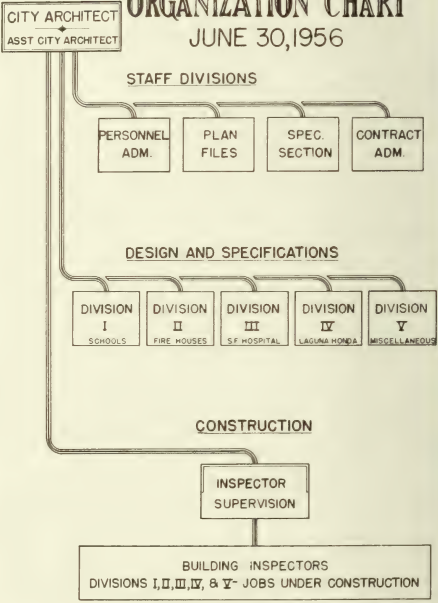
RETIREMENTS AND DEATHS

The Bureau lost the services of the following valued employees during the year:

Wm. E. Eggert	Died	8-29-55	Chief of Party	43 years
R. G. Wadsworth	Retired	9- 1-56	City Engineer	10 years
N. F. Newman	Retired	1- 1-56	Engineer	28 years
M. H. Levy	Retired	2- 1-56	Engineer	47 years
Mrs. E. V. Potter	Died	2-10-56	General Clerk	2 years
H. J. Law	Retired	3-10-56	Jr. Engineer	32 years

BUREAU OF ARCHITECTURE
DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART
JUNE 30,1956



BUREAU OF ARCHITECTURE

Charles W. Griffith - City Architect

FUNCTIONS

The Bureau of Architecture is concerned with all new and existing City buildings which are under the jurisdiction of the Department of Public Works. The Bureau is charged with the responsibility for the design and construction of new City buildings and the modernization, remodeling, and maintenance projects of existing City buildings, which exceed $2,000. in cost. The activities of the Bureau are divided into two separate but related functions: the preparation of estimates, drawings, and specifications, and the supervision of construction.

Independent architectural firms are ordinarily commissioned to design and prepare the working drawings and specifications for new Civic buildings, under the direction of the Bureau. The Bureau assists the client agency in the preparation of the design program, arranges and participates in the many conferences necessary between the architects and the agency, reviews the drawings and specifications, checks all cost estimates closely, and certifies the proper completion of the architectural work through the various stages. The Bureau also coordinates and programs the work of the architects to insure the completion of the drawings and specifications to comply with required construction schedules. When the drawings and specifications are properly completed, the Bureau prepares all necessary forms and data so that bids may be requested and received by the Director of Public Works.

Modernization, remodeling, repair projects exceeding $2,000. in cost, and some new buildings are handled directly by architects and draftsmen of the Bureau; and, in general, the same procedures are followed. This phase of the Bureau's work has been increasing while the tremendous new building program, which was principally the result of the 1948 School Bond Issue, is decreasing.

ORGANIZATION

The Organization Chart indicates in a very brief manner the breakdown of divisions which has been found efficient in handling the Bureau's work. The City Architect and Assistant City Architect are indicated in one block at the head of the Bureau. There is a further breakdown of responsibilities between the two as follows:

1. The Assistant City Architect directs the Fire Department, Lagunda Honda and Hall of Justice Bond programs, and special architectural and engineering surveys.

2. The City Architect directs the other programs and assignment of personnel.
3. Both the City Architect and the Assistant City Architect maintain sufficient familiarity with the other's work so that no delay in the various programs results when either is away from the office on vacation or for other reasons.

The organization of the Bureau of Architecture is further broken into three separate and distinct functions: Staff Work, Design and Specification Work, and Inspection. These functions are as follows:

Staff Divisions

Division I	Contract Administration This division is responsible for the coordination of jobs under construction. All correspondence, shop drawings, reports, etc., concerning jobs under construction and completed work clear through this division.
Division II	Specifications This division is responsible for specification standards, the coordination and accuracy of the general conditions affecting the contract, and the mechanics of editing, checking, mimeographing and assembly of the specifications.
Division III	Personnel This division is responsible for fiscal arrangements and work orders for both architectural and related engineering services.
Division IV	Plan Files This division is responsible for requisition and procurement of blueprints, assembly of blueprints, specifications, and bid forms, the storage of tracings, blueprints and specifications, and related work.

Design Division

The responsibility for processing the various jobs from the initial inception through to the completion of the final drawings and specifications has been broken down into five separate divisions. Each of these divisions is headed by an architect who not only maintains formal and informal relationships with the client agency, but also supervises the draftsmen assigned to him for the preparation of drawings and specifications. The five Divisions are:

Division I	School Work
Division II	Fire Department Work
Division III	San Francisco Hospital Work
Division IV	Laguna Honda Work
Division V	Miscellaneous Work Miscellaneous Work includes all work which does not fall under the general categories listed as Divisions I, II, III, and IV.
Division VI	This division is being established in order to process the programming and design work in connection with the Hall of Justice Bond Issue, which was approved June 5, 1956.

INSPECTION DIVISION

The Bureau supervises and inspects all building construction, whether it has been designed by private architects or by Bureau personnel. The responsibilities of the Inspection Division include progress and validity of the construction work, contract payments, and certification of completion of contract. The number of contracts awarded and under construction was 80, and the aggregate value of these contracts was $ 9,996,166.

The Inspection Division is headed by the Senior Supervising Construction Inspector who also supervises the Junior Supervising Construction Inspector and another Building Inspector who is assigned supervisory duties for the present. The twenty-seven building inspectors are broken down into two groups of eight and one of eleven, which are supervised by the three mentioned above.

A secondary responsibility of the Inspection Division is concerned with the jobs completed throughout the previous fiscal year. The amount of work which will be done on these completed jobs is indeterminate but, in certain cases, will be considerable. A thorough inspection must be made of each job at the end of the year bonded guarantee period, one year after acceptance of the job, and, any defect found, which is the result of faulty materials or workmanship, must be corrected by the Contractor. A situation often develops in which much correspondence and many conferences are involved when such defective work is discovered, and considerable time is always taken in the proper disposition of such cases.

BOND ISSUES

The greatest amount of the Bureau's work load at present is processing work for which bonds have been voted. The bond issue work is as follows:

I - 1948 School Bond Issue - $48,890,000

This bond issue was voted in November of 1948 and construction started on the first school project early in 1950. This huge building program continued without interruption through the three years of the Korean War, which created many serious material and labor shortages, and is now almost completed. The status of this work is as follows:

Major School Bond Projects

	No.	Cost	Percentage
Construction completed	34	$29,626,152.09	80
Construction under contract	4	7,692,768.66	20
TOTALS	38	$37,318,920.75	100

II - 1952 Fire Department Bond Issue - $4,750,000

This bond issue work progressed extensively during the past fiscal year. The reconstruction work was completed on four fire houses, and four new fire houses were under construction.

The program is divided into two general parts: (1) the reconstruction of existing fire houses, wherever such reconstruction is practicable and economical, and (2) the construction of new fire houses to replace those houses which must be abandoned because it is neither economical nor feasible to complete a reconstruction program which would make them structurally safe.

The construction of new fire houses has been delayed considerably, however, by factors over which this Bureau has no control. The acquisition of sites for the new fire houses has caused the greatest delay, as it usually requires a period of a year or more to secure the site after a definite location has been determined. No design work on a new fire house can be done prior to the final acquisition of a site. It is therefore obvious that a period of approximately two years is required between selection of site and actual construction of a new fire house.

The status of this Bond Program is as follows:

Reconstruction Projects

	No.	Amount
Reconstruction completed	9	$ 585,657.91
Plans and specifications completed	1	67,000.00
Plans and specifications under preparation	2	90,000.00
TOTALS	12	$ 742,657.91

New Fire Houses

	No.	Amount
Construction completed	4	$ 838,562.58
Construction in progress	3	645,654.00
Plans and specifications completed	1	175,000.00
Plans and specifications being completed	2	521,500.00
Delayed pending selection and acquisition of sites	2	383,000.00
TOTALS	12	$2,563,716.58

Nine reconstruction projects and three new fire house construction projects, some of which may proceed during fiscal year 1956-57 are temporarily held in abeyance.

In addition to the above, one new fire house, Engine 10, which was partially financed through bond funds, was completed during the fiscal year 1953-54. One other new fire house, Engine 29, which did not involve bond funds but which was coordinated with the bond program was completed April 22, 1954.

III - 1954 Laguna Honda Bond Issue - $5,475,000

The preparation of drawings and specifications for this work began early in 1955, as soon as the bond funds were made available. The design work has progressed rapidly and contracts in approximate amount of $2,500,000. were awarded during the fiscal year 1955-56. The construction of one project, Alterations to Kitchen, Bakery and Commissary, which involved approximately $80,000. of bond funds is scheduled for completion on August 1, 1956.

The status of the bond issue work, as of July 1, 1956, was as follows:

Status	No. of Projects	Allotment	Percentage
Under construction	6	$2,713,585.89	55
Advertised	1	500,000.00	10
Working drawings in preparation	2	519,000.00	10
Preliminary drawings in preparation	2	1,208,104.11	25
SUBTOTAL (Design & Construction)	11	$4,940,690.00	100
Equipment, misc. expenses and contingent fund		534,310.00	
TOTAL (BOND ISSUE)		$5,475,000.00	

Related Work

These two Public Health bond issues are unique in that the funds for all deferred maintenance work were deleted with the intent that such funds would be provided in the budget each year and that this work would be coordinated with the bond work. The deferred maintenance work provided in the budget for fiscal year 1955-56 was nine projects in total amount of $ 364,650. All of this work was either completed or in construction stage at the close of the fiscal year.

IV - 1954 San Francisco Hospital Bond Issue - $5,830,000

The preparation of plans and specifications for this Bond Issue also began early in 1955, as soon as bond funds were available. It has progressed rapidly, but is not as far along as the Laguna Honda Bond Issue, because of the necessity of close coordination of the work with the space available for construction.

The status of the work as of July 1, 1956, was as follows:

Status	Number of Jobs	Allotment	Percentage
Under construction	8	$1,296,662	26
Working drawings in preparation	6	1,343,000	27
Preliminary drawings in preparation	4	900,000	18
Preliminary program in preparation	4	1,490,338	29
SUBTOTAL (Design & Construction)	22	$5,030,000	100
Equipment, misc. expenses and contingent fund		800,000	
TOTAL (BOND ISSUE)		$5,830,000	

The deferred maintenance work, which was included in the budget for fiscal year 1955-56 was nine projects in total amount of $410,500. All of this work was either completed or in construction stages at the close of the fiscal year.

V - 1954 Bond Issue for Civic Center Exhibit Hall - $3,275,000

The drawings and specifications for this project were completed during the fiscal year and all of the necessary approvals of the various Commissions and Departments were secured. This project, with an estimated cost of $2,900,000., was advertised on June 29, 1956, and bids are to be received on August 1, 1956.

The allotment for the project is as follows:

Construction	$2,900,000.
Architect-Engineer Fees:	203,000.
General Office Expenses:	27,000.
Miscellaneous Expenses:	10,000.
Inspection and Tests:	35,000.
Contingent Fund:	100,000.
TOTAL BOND ISSUE	$3,275.000.

The schedule for the project is as follows:

Receive Bids:	August 1, 1956
Award contract:	August 8, 1956
Start date for construction	August 27, 1956
Completion and acceptance of building	November 27, 1957

VI - Proposed Bond Issue - School Department

This Bureau has assisted the San Francisco Unified School District in preparing data for a bond issue for new secondary schools during the coming fiscal year. This bond issue will be presented to the voters in the summer or fall of 1956, in the amount of $ 27,000,000.

VII - 1956 Hall of Justice Bond Issue - $19,475,000

A Bond Issue for a new Hall of Justice was approved by the voters in the election of June 5, 1956. This Bond Issue was based on an estimate prepared by the Bureau of Architecture on March 12, 1955, as follows:

A.	Building Construction Cost	$14,711,403.
B.	Property	750,000.
C.	Technical Fees and related costs	1,176,912.
D.	Furnishings and equipment	735,570.
E.	Miscellaneous Costs	294,228.
F.	Contingent Fund	1,691,811.
G.	Parking Lot and Improvements	115,076.
	TOTAL	$19,475,000.

No funds were appropriated for this project in 1955-56, but preliminary negotiations for the property and architectural and and engineering services had been completed, and the programming of the project was under study. A building committee, formed of representative members of each of the ten departments to be housed in the structure, was being activated to consider and approve the design work in its various stages. A schedule for the entire project had been completed which indicated completion of the project on or before January 1, 1961.

The occupancy of the New Hall of Justice will be as follows:

Occupancy of Building:	Cost: (%)	Area (%)	Sq. Ft. Area
Police Department – City Prison	58.00	63.60	454,000
Criminal Courts (4 Municipal)	9.20	5.20	38,000
Criminal Courts (4 Superior)	6.50	5.30	38,500
Criminal Courts (3 Traffic)	6.70	7.30	54,000
District Attorney	4.10	4.30	30,500
Adult Probation	3.70	3.80	22,000
Public Defender	.85	.90	6,200
County Clerk – (Criminal Division)	.45	.50	5,500
Coroner	2.80	2.60	18,500
Sheriff's Detention Jails	7.70	6.50	46,000
TOTALS	100.00	100.00	713,200

The site and architects had been selected by a Committee including the Mayor and Chief Administrative Officer. It will be in the block bounded by 7th, Bryant, Harrison and Harriet Streets, and the architects will be Weihe, Frick & Kruse, the successor firm to Bakewell and Brown, the architects who designed the City Hall, Federal Building, War Memorial Opera House and Veterans Building, all located at the San Francisco Civic Center.

An appropriation was being prepared for necessary expenses in connection with the property and design work at the end of the fiscal year, in total amount of $1,690,500. If this appropriation is approved by the Board of Supervisors, substantial progress will be made on the project during the fiscal year 1956-57.

VIII – Future Bond Issues for Public Buildings

At the request of the Mayor, preliminary data was prepared for the following projects, which will probably be presented to the voters for a Bond Issue sometime in the future:

A. City and County Office Building

Preliminary data was assembled for a new building to house the Administrative City and County Offices. The total sq. ft. area is 571,000 sq. ft., the estimated cost $16,000,000. and, the proposed location Marshall Square in the Civic Center.

B. Remodeling of the City Hall into a Civil Courts Building

Preliminary data was also assembled for the proposed remo eling of the City Hall into a Civil Courts Building. The tot estimated cost of this conversion is $12,000,000.

A third possible future Bond Issue is the Modernization an Rehabilitation of the Civic Center Auditorium. An estimate $6,000. was submitted by the Bureau in order to provide fund for preliminary studies and cost data in connection with thi project in June 1956. This request had not been considered b the Board of Supervisors at the close of the fiscal year.

PERSONNEL

The permanent staff of the Bureau increased by four during th past fiscal year, due principally to the fact that additional personn were required to process the increased work load incident with th approval of the Public Health Bond Issues. There was also an in crease of four in the temporary employees. This increase was du principally to the increased school vacation work during the summe of 1956.

	30 June 1955		30 June 1956		Change	
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
City Architect	1	0	1	0	0	0
Asst. City Architect	1	0	1	0	0	0
Architects	8	1	8	1	0	0
Sr. Arch. Draftsman	9	1	9	1	0	0
Arch. Draftsman	5	0	8	0	+3	0
Jr. Draftsman	1	0	1	0	0	0
Office Assistant	2	1	2	1	0	0
Senior Clerk	1	0	1	0	0	0
General Clerk Steno.	4	0	4	0	0	0
General Clerk Typist	3	1	3	1	0	0
Supervising Construction Inspector	2	0	2	0	0	0
Building Inspector	14	8	15	12	+1	+4
TOTAL	51	12	55	16	+4	+4

Total Personnel - 71

The Bureau's personnel is divided into four groups according to location. The duties performed by these groups are briefly described below:

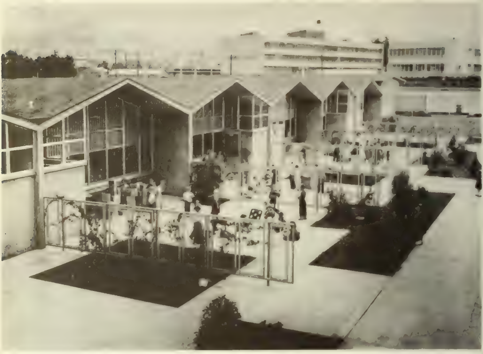
Personnel	Group	Location	Activities
7	1	Room 265, City Hall	Administrative Conferences, Assembly of Plans and Specifications for Bidding, General Files, Drafting for Budget
9	2	Room 252, City Hall	Inspection Estimates Preliminary Design Program and Budget Section, Analysis of Construction
28	3	45 Hyde Street	General Drafting Room, Specifications, Drawings, Research, Checking & Report Section
27	4	In the Field	Field Inspection

71 - Total Personnel

WORK DONE

The work completed by the Bureau during the fiscal year of 1955-56 was fairly evenly divided between the office and the field. The number of jobs and dollar value of the work processed was as follows:

	No. of Jobs	Amount
1. Contracts awarded and under construction during fiscal year	80	$ 9,996,166.59
2. Amounts expended for construction work during fiscal year	137	5,755,051.44
3. Work under preparation for advertising and award of contract during fiscal year 1956-57	66	$10,982,200.00

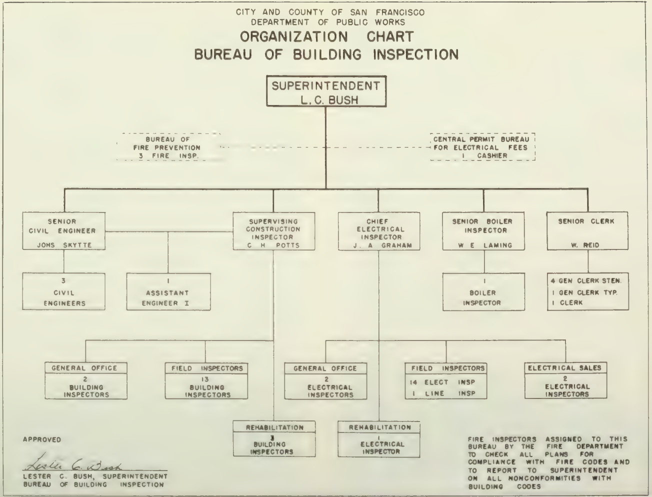


LAKE MERCED SCHOOL - JUNE 13, 1956

COMMODORE STOCKTON SCHOOL - JULY 1, 1956

ORTEGA BRANCH LIBRARY - JULY 1, 1956

FIREHOUSE FOR ENGINE COMPANY No. 26 - JULY 1, 1956



CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
BUREAU OF BUILDING INSPECTION

SUPERINTENDENT L. C. BUSH
BUREAU OF FIRE PREVENTION 3 FIRE INSP.
CENTRAL PERMIT BUREAU FOR ELECTRICAL FEES 1 CASHIER
SENIOR CIVIL ENGINEER JOHS SKYTTE
SUPERVISING CONSTRUCTION INSPECTOR C H POTTS
CHIEF ELECTRICAL INSPECTOR J. A GRAHAM
SENIOR BOILER INSPECTOR W E LAMING
SENIOR CLERK W. REID
3 CIVIL ENGINEERS
1 ASSISTANT ENGINEER I
1 BOILER INSPECTOR
4 GEN CLERK STEN.
1 GEN CLERK TYP.
1 CLERK
GENERAL OFFICE 2 BUILDING INSPECTORS
FIELD INSPECTORS 13 BUILDING INSPECTORS
GENERAL OFFICE 2 ELECTRICAL INSPECTORS
FIELD INSPECTORS 14 ELECT INSP 1 LINE INSP
ELECTRICAL SALES 2 ELECTRICAL INSPECTORS
REHABILITATION 3 BUILDING INSPECTORS
REHABILITATION 1 ELECTRICAL INSPECTOR

APPROVED

Lester C. Bush
LESTER C. BUSH, SUPERINTENDENT
BUREAU OF BUILDING INSPECTION

FIRE INSPECTORS ASSIGNED TO THIS BUREAU BY THE FIRE DEPARTMENT TO CHECK ALL PLANS FOR COMPLIANCE WITH FIRE CODES AND TO REPORT TO SUPERINTENDENT ON ALL NONCONFORMITIES WITH BUILDING CODES

BUREAU OF BUILDING INSPECTION

Lester C. Bush, Superintendent

FUNCTIONS

For the purpose of ensuring compliance with City ordinances, the Bureau of Building Inspection reviews plans and inspects construction and installations involving structural, electrical and mechanical work throughout the City. It also studies and reports on legislation affecting buildings and structures, and proposes new legislation as required.

BUILDINGS AND STRUCTURES

The Bureau consults with architects, engineers, contractors and home owners in the preliminary stages of the preparation of their plans whether for new buildings or for alterations to existing buildings.

The Bureau examines and reports on all applications for permits submitted to the Department of Public Works for new buildings, alterations to existing buildings, billboards and signs (electric and non-electric); inspects all this work as it progresses, makes a final inspection of new buildings or where a change of occupancy classification occurs, and issues Certificates of Final Completion when the work is finished.

"Called Inspections" - those inspections which must be made on construction or reconstruction before further work may be done, are as follows:

1. Foundations or other concrete forms prior to pouring concrete.
2. Reinforcing for concrete prior to pouring concrete.
3. Structural steel prior to enclosing.
4. Prior to covering up with lathing, plaster, or sheathing.
5. Prior to plastering when it is for fire-resistive construction.
6. A final inspection prior to occupancy of the building.

ELECTRICAL WORK

The Bureau regulates and supervises the installation of interior electric wiring of commercial, industrial and residential buildings and insures by frequent and adequate inspection that the standards provided for in City Ordinances, State and National Codes are maintained. Closely tied in with the inspection of interior wiring of buildings are other activities of the Bureau made necessary by the provisions of electrical ordinances affecting other City Departments, and which entail cooperation with the Bureau of Fire Prevention and Public Safety, Police Department, Health Department, and with the Division of Industrial Safety of the State of California. Some of these activities are summarized in the following paragraphs.

Reports of fire presumably caused by defective electrical installations and all places reported to be of potential electrical hazard are also checked by the electrical inspectors.

Coin operated amusement devices with electrical controls are licensed by the Police Department and, before issuance of permit, are required to meet the approval of the electrical inspector.

Night clubs and places of public assembly are licensed through the Health Department, and before a permit to operate is granted, the requirements of this Bureau in regard to adequate lighting and emergency exits must be complied with.

A copy of all complaints and violations of the Electrical Safety Orders of the State of California issued to property owners is filed with this Bureau, is checked and verified by the electrical inspectors, and is held in the files until final approval is given.

State of California laws require that the electrical installation of wiring circuits, fixtures, signs, motors and electrical appliances be made by contractors licensed by the State, and San Francisco ordinances require that such licensed contractors be registered with the Bureau. Industrial plants which have their own plant electricians must also register with the Bureau.

All spray painting establishments in the City of San Francisco are licensed through the Bureau of Fire Prevention and Public Safety, and before licenses are issued the electrical work connected therewith must be approved by this Bureau.

BOILERS AND AIR TANKS

Steam boilers and air pressure tanks are inspected to ensure compliance with all existing laws.

PERSONNEL

The personnel of this Bureau as of June 1956 consisted of 55 persons in the various classifications shown on the accompanying organization chart.

ORGANIZATION

The organization of the Bureau is shown on the accompanying chart. Duties of the various members of the staff are described in the following paragraphs.

Superintendent..... In addition to supervising the office, he takes an active part in the deliberations of various departments of the City government as well as other organizations with reference to matters of building construction, the building code, and building safety.

Supervising Construction Inspector.....Acts as assistant to the Superintendent in the field; assigns and supervises the work of building inspectors; prepares records and reports; and checks construction progress.

Building Inspectors.....One building inspector acts as assistant to the Supervising Construction Inspector. He assists the public at the counter and provides them with the information they seek concerning various building regulations.

One building inspector represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals with the exception of new construction. He inspects and reports on all night clubs and dance halls when requested by the Police Department or the Department of Public Health.

Thirteen building inspectors are assigned to specific districts into which the City is divided and are charged with the responsibility for inspection work in their respective districts. This includes new construction of all types, alterations, billboards and signs. They report on all applications for construction in their districts prior to examination by the divisions of the Bureau; prepare and post Certificates of Final Completion; check and follow up complaints; interview property owners; and appear before courts in matters of condemnation and prosecution.

Three building inspectors are assigned to the Urban Renewal Program.

Boiler Inspectors.....Make all installation inspections where any pressure vessel is installed. Inspect all boilers and air pressure vessels regularly when they are not insured and inspect and recommend repairs to defective equipment.

As deputy state inspectors, they must check all requests made by the Division of Industrial Safety and report any action taken by the City. They investigate all accidents where pressure vessels are involved and report the probable cause to the State and to the National Board of Boiler and Pressure Vessel Inspectors.

One inspector is a member of the A.S.M.E. Boiler Code Committee and passes on all new A.S.M.E. code changes and submits his report each month to the New York office of the A.S.M.E.

Complaints about pressure vessels are investigated and the necessary action taken to eliminate any defects or violations if found.

Senior Engineer (Civil).....Acts as Chief Structural Engineer and as principal assistant to the Superintendent; reviews engineering data submitted for approval of new materials and assemblies and makes recommendations to the Superintendent regarding such approvals; and supervises the work of the other engineers in the Bureau.

Structural Engineers (Civil).....Check and report on all plans pertaining to structural engineering; make field inspections; follow up matters concerning structural safety brought to their attention by the Supervising Construction Inspector or the district building inspectors; and assist other departments, or bureaus in structural matters.

One Engineer, Civil, examines all plans and details for new construction and estimates the cost thereof. He also represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals which concern new construction.

Senior Clerk.....In charge of all clerks in the Bureau.

Chief Electrical Inspector .....Under general direction assigns, supervises and reviews the work of electrical inspectors; approves or disapproves plans and specifications for electrical installations; supervises the maintenance of inspection records; and makes required reports.

Two electrical inspectors are detailed to the enforcement of the Electrical Sales Ordinance. This ordinance governs the sale, display, or giving away as a premium, all electrical material, devices and appliances designed for attachment to, or installation in or on any electrical circuit or system for light, heat or power. This entails visiting all retail stores, premium stores, factory agents, jobbers, manufacturers, and wholesalers to inspect all materials, devices, and appliances, and to determine whether they are approved by this department before they can be sold, displayed, or installed in San Francisco. In many cases this means granting a provisional approval on articles that have been submitted to Underwriters' Laboratories, Inc., for testing but testing not having been completed allows a manufacturer to install or sell these appliances or materials with the proviso that any corrections required be made in the field. All retail stores registered under this ordinance at present are visited regularly for the purpose of inspecting the merchandise. As more merchants are going into business all the time and many ownerships are being changed, it is necessary to visit these stores to check their registration and inspect their merchandise.

The Line Inspector.....Inspects all installations, alterations, and maintenance of overhead lines owned and operated by public and private utilities used for the purpose of distributing electric power, light, communication and signal transmission, to see that they conform to the Rules for Overhead Line Construction (G.O. 95) Public Utilities Commission, State of California, and the San Francisco Electrical Code. The line inspector also checks plans and specifications, and inspects all overhead lines pertaining to trolley coach installations. He inspects temporary electrical street decorations when supported by trolley span wires, or messengers and inspects installations of radio and television antennas. He checks all underground districts to see that they are kept clear of all overhead wires and cables and checks the erection of scaffolds that may be in proximity to high voltage lines.

Two electrical inspectors are assigned to office work. They handle all complaints and requests for information from the public.

One electrical inspector is assigned to the Urban Renewal Program.

Fourteen electrical inspectors are assigned to districts in the City and each handles all of the electrical work in his assigned district except those items under the Electrical Sales Ordinance.

URBAN RENEWAL PROGRAM

This program commenced with the title of Slum Clearance Program and was later changed to the title of Rehabilitation Program. With the appointment by the Mayor of the Citizen's Participation Committee for Urban Renewal it is now known as the Urban Renewal Program. Under any of the titles this program has been in effect since 1953 with a minimum of personnel assigned. The recommendations of the Mayor's committee call for an accelerated program, as well as a more effective one, to establish a continuing program to eliminate or correct substandard conditions in blighted areas by requiring compliance with existing codes. All code enforcement agencies are involved. This program concerns apartment houses, hotels, rooming houses, etc.

DEPARTMENT CONDEMNATION PROGRAM

This program was placed in effect in this Bureau in February 1954 under the authority granted in the San Francisco Building Code. All types of buildings are involved with the exception of occupied hotels and apartment houses which, however, may be involved where only structural or safety conditions are concerned. This program has been very effective in either restoring unsafe buildings to meet requirements of the codes, or in causing the demolition of them. This program supplements the Urban Renewal Program and accomplishes a great deal for our City.

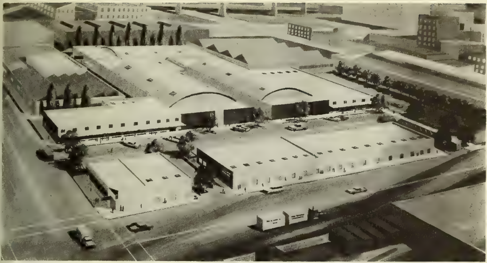
BUILDING CODE

The new building code, enacted by the Board of Supervisors, became effective May 7, 1956. It has not yet been published in book form. There have been many changes in the new code with reference to the one it replaced. The changes are in keeping with the times.

BUILDING CONSTRUCTION

FISCAL YEAR	PERMITS	COST OF CONSTRUCTION
1952-1953	8494	$45,920,105
1953-1954	8601	62,470,265
1954-1955	8961	61,812,718
1955-1956	9663	71,692,205

CALIFORNIA MASONIC MEMORIAL - CALIFORNIA AND TAYLOR STREETS



SAN FRANCISCO FLOWER TERMINAL

FIREMAN'S FUND INSURANCE CO. - CALIFORNIA AND LAUREL STREETS

WORK DONE

The extent of routine operations of this Bureau for the fiscal years 1955-1956 and 1954-1955 is set forth in the following tabulation taken from the records of the Central Permit Bureau.

Type of Construction	Number of Permits 1954-1955	Estimated Cost	Number of Permits 1955-1956	Estimated Cost
1A	8	$ 2,916,200	7	$13,805,253
1B	22	11,967,864	7	8,001,764
2	1	18,676	1	60,000
3	43	3,544,215	44	6,081,413
4	25	1,220,675	28	777,052
5	1334	24,436,890	1225	24,411,910
Alterations	7338	17,646,322	8133	18,554,122
SUB-TOTALS	8771	$61,750,842	9445	$71,691,514
Billboards	190	61,876	218	691
TOTALS	8961	$61,812,718	9663	$71,692,205

TYPE 1A - Steel frame with reinforced concrete walls and floors. Fire-resistive construction.

TYPE 1B - Built entirely of reinforced concrete. Fire-resistive construction.

TYPE 2 - Heavy timber construction with exterior walls of masonry.

TYPE 3 - Wood frame floors with exterior walls of masonry. Ordinary masonry construction.

TYPE 4 - Light incombustible frame construction.

TYPE 5 - Wood frame construction.

BUREAU STATISTICS
FOR FISCAL YEAR

Inspections reported by inspectors of buildings	55,187
Projects remaining on which permits have been issued that have not been reported completed by inspectors of buildings	3,286
Complaints that have been reported adjusted by inspectors of buildings	2,965
Inspections reported by inspectors of boilers	2,287
Complaints and requests for information recorded	770
Applications for permits examined by and approved by structural engineers	3,954
Applications for permits examined and approved by plan checker	1,336
Miles traveled during the year by 29 passenger cars on inspection service	204,744
Permits issued, wiring, fixtures, signs	16,985
Inspections made	57,344
Complaints investigated (found defective)	5,813
Installations uncovered that were not with the department ("sneaked-in" jobs)	2,654
Installations in progress as of June 30, 1956	6,412
Installations completed	17,617
Pin ball machine inspections	872
Juke box inspections	184
Electrical Sales inspections	4,444
Overhead line inspections	4,697

INTERNATIONAL BUSINESS MACHINES
FRONT AND MARKET STREETS

MAINTENANCE AND OPERATION

Lawrence J. Archer, Assistant Director of Public Works

Maintenance and Operation activities of the Department of Public Works are centered at 2323 Army Street in the four bureaus of Sewer Repair and Sewage Treatment, Street Repair, Building Repair and Street Cleaning.

In general the work of the maintenance and operation bureaus continued at about the same level as during the preceding year except for the additional assignment of the Street Tree Program to the Bureau of Street Cleaning starting July 1, 1955.

The number of employments authorized in these bureaus total 1119, a net increase of 24 during the year, as indicated by Tables C and D. Over the past 5 years, there has been a net increase of 109 employees due principally to the transfer of added functions to the bureaus. It is noteworthy that exclusive of these additional functions there has been a net decrease of 15 employee allowances during the past 5 years even though the work demands have substantially increased.

Funds provided for the services of maintenance and operation bureaus during the year amounted to a total of $8,654,181 including both budget appropriations and funds received from other sources. From these funds a total of $8,407,896 was expended, as indicated by Table E. With an estimated total population of 807,000 for the City and County of San Francisco, the year's expenditures for this segment of the department's activity amounts to $10.42 per capita.

The bureaus have an assembly of 188 automotive vehicles and 139 pieces of specialized portable equipment, exclusive of 32 rented and hired vehicles, as tabulated in Tables A and B. There has been a steady improvement in the acquisition of labor saving devices and the replacement of antiquated equipment. Principal acquisitions during the year include the purchase of a heater-planer for work in connection with street resurfacing and the purchase of a litter patrol truck for the purposeful use of emergent and urgent street cleaning operations. The rising costs of certain Hired Trucks has made it more economical to program the replacement of 13 of these next year with City purchased equipment.

The superintendents of all the Bureaus have made creditable showing in analyzing their operation methods and costs and in taking active steps in promoting operation efficiency. Appreciation is especially expressed to the exemplary loyalty and devotion to duty displayed by the personnel of the maintenance and operating bureaus.

ORGANIZATIONAL RELATIONSHIPS
MAINTENANCE, REPAIR & OPERATION
1955 - 1956

DIRECTOR
Sherman P. Duckel

Assistant Director - Maintenance and Operation
L. J. Archer

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
B. Benas, Superintendent

FUNCTIONS
1 Maintenance and Repair of Sewerage System
2 Operation and Maintenance of 14 Sewage Pump Stations
3 Operation and Maintenance of 3 Sewage Treatment Plants
4 Control of Industrial Waste Discharged to Sewers
5 Air Pollution Surveys
6 Advisory Service to other City Departments on Sewage Treatment

PERSONNEL ALLOWANCE
(a) Budgeted [illegible]
(b) Assigned from other Bureaus of the Department [illegible]
(c) Contract employees on rented trucks [illegible]
Total [illegible]

EXPENDITURES
(a) Budgeted by Bureau $[illegible]
(b) Funds from other sources 4,[illegible]
Total $[illegible]

BUREAU OF STREET REPAIR
F. D. Brown, Superintendent

FUNCTIONS
1 Maintenance and Repair of Public Streets
2 Operation and Maintenance of [illegible] Lift Bridges
3 Operation and Maintenance of Asphalt Plant
4 Operation of Concrete [illegible]
5 Operation and Maintenance of Broadway Tunnel
6 Removal of Earth [illegible] Deposits from Street Areas

PERSONNEL ALLOWANCE
(a) Budgeted 16[illegible]
(b) Assigned from other Bureaus 1
(c) Contract employees on rented trucks [illegible]
Total [illegible]

EXPENDITURES
(a) Budgeted by Bureau $[illegible],41[illegible],4[illegible]
(b) Funds from other sources [illegible]
Total $1,[illegible]

BUREAU OF BUILDING REPAIR
W. C. [illegible], Superintendent

FUNCTIONS
1 Maintenance and Repair of Public Buildings and Structures
2 Repair of Monuments in Street Areas
3 Provide Operating and Custodial Personnel for Public Buildings
4 Paint Street Striping and Markings
5 Repair of Street Structures and Sidewalks [illegible] City Property
6 Maintenance of Street-Name Signs

PERSONNEL ALLOWANCE
(a) Budgeted by Bureau [illegible]4
(b) Assigned from other Bureaus [illegible]
(c) Contract employees on rented trucks [illegible]
Total 34[illegible]

EXPENDITURES
(a) Budgeted by Bureau $2,45[illegible]
(b) Funds from other sources 1,[illegible],84[illegible]
Total $3,4[illegible]

BUREAU OF STREET CLEANING
J. J. [illegible], Superintendent

FUNCTIONS
1 Cleaning of Public Street Surfaces
2 Cleaning & Ventilating Underpasses
3 Cleaning & Relettering and [illegible] Tunnels
4 Planting and Maintaining Street Trees, Shrubbery, and [illegible]

PERSONNEL ALLOWANCE
(a) Budgeted by Bureau [illegible]
(b) Assigned from other Bureaus 1
(c) Contract employees on rented trucks 1
Total 37[illegible]

EXPENDITURES
(a) Budgeted by Bureau $1,624,[illegible]
(b) Funds from other sources [illegible],64[illegible]
Total $1,876,84[illegible]

SUMMARY
Total Personnel Allowance [illegible],155
Total Expenditures, less reimbursements $8,467,8[illegible]

The chart facing this page indicates, in brief detail, the organizational relationship of these four bureaus, including fund and personnel relationships.

CHANGES IN SUPERVISORY PERSONNEL

The valued services of the following supervisory persons were separated through retirement from City employment after years of meritorious accomplishment:

NAME	POSITION	SERVICE YEARS IN DEPARTMENT	DATE RETIRED
F.E. Bignami	General Foreman Bureau of Sewer Repair and Sewage Treatment	20	12-1-55
L.V. Easterday	District Director Bureau of Street Cleaning	32	6-1-56
P.G. Ongerth	General Foreman, Plumber Bureau of Building Repair	18	6-1-56
R.V. Rush	Supervisor of Janitors Bureau of Building Repair	29	2-1-56

The following persons were appointed to supervisory positions during the year:

NAME	POSITION	DATE APPOINTED
R.M. Davidson	Chief Operating Engineer Bureau of Sewer Repair and Sewage Treatment	4-11-55
W.B. Jones	Senior Civil Engineer Bureau of Sewer Repair and Sewage Treatment	12-27-55
G.L. Krogman	Supervisor of Janitors Bureau of Building Repair	2-27-56
J. Murphy	General Foreman Bureau of Sewer Repair and Sewage Treatment	12-1-55
W.B. Nigro	District Director Bureau of Street Cleaning	6-1-56

FUNCTIONAL SCOPE OF BUREAU RESPONSIBILITIES

The functions of the maintenance and operation bureaus include, principally, the following responsibilities:

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

(a) Maintenance and operation of 3 sewage treatment plants with a combined average dry weather treatment capacity of 110 mgd; a maximum storm water capacity of 265 mgd; a total capital outlay of $18,000,000; a total site acreage of 23.2; an annual operating and maintenance expense of $864,304, and a normal employment of 102 persons.

(b) Operation and Maintenance of 14 sewage pumping stations with a combined pumping capacity of 86 mgd. Total annual expense, $91,956; normal employments, 12.

(c) Maintenance and repair of main sewers except for such work as is performed under Bureau of Engineering contract procedure. Total length of main sewers approximate 800 miles of which 590 miles are vitrified clay, 103 miles are concrete and 107 miles are brick and miscellaneous types of conduit. Total annual maintenance and repair expense $565,802; normal employments, 94.

(d) Installation and repair of side sewers at property owners' expense. During the year 546 side sewers were installed and 125 repaired at a total cost of $133,325. Employees assigned to this work averaged about 15.

(e) Maintenance of catchbasins. During the year a total of 17,569 catchbasins were cleaned, including the number of basins that required repeated cleanings, out of a total of about 25,000 basins. Assigned to this operation were 8 eductors, each manned by a chauffeur and 2 sewer cleaners. Two eductors are held in reserve for replacing eductors that become inoperative. Total annual expense was $158,593; normal employments, 24.

(f) Operation of a gas detection survey, consisting of a chemist and a laborer, to test sewer manholes and structures for explosive and toxic gases. During the year 7,871 manholes were tested and 71 manholes, or 0.90 percent, contained gases in dangerous proportions. Total annual expense, $10,641.

(g) Industrial waste control consisting of checking specific wastes and Ordinance violations, principally performed through the services of one assistant Mechanical Engineer.

(h) Advisory service to other departments and bureaus.

BUREAU OF STREET REPAIR

(a) Maintenance and repair of 820.37 miles of improved streets and appurtenances, except for such work as is performed under Bureau of Engineering contract procedure; emergency work on unimproved streets; operation and maintenance of a granite curb redressing yard; work for other departments and bureaus. Of the improved streets, 29.61 miles are classified as State Highways, 184.90 miles as Major Streets and 605.86 miles as Secondary Streets. Unimproved Streets, amounting to about 99 miles, are not maintained or repaired by the City, except in such instances as to correct hazardous conditions. The total expense for the year was:

Street Repair	$1,010,699.19
Curb Yard	16,110.48
State Highway Repair	12,975.10
Work for Other Departments and Bureaus	148,362.47
Total	$1,188,147.24

Normal employments, 135

(b) Operation and maintenance of the Municipal Asphalt Plant with output capacity of 90 tons per hour. Production for the year, 49,946 tons; total expense, $216,032.97; average unit cost, $4.325; average employments, 6.

Asphaltic mixtures produced were charged to the functions for which they were used, at the average unit cost. The expense of $216,032.97 is included in expenses shown under (a) above.

(c) Operation and maintenance of 3 lift bridges over navigable waters. The total number of openings for ship passages amounted to 800 for 3rd & Channel bridge, 290 for 4th & Channel Bridge and 1,338 for Islais Bridge.

Except for urgent ship passages, all bridges are normally closed during the street traffic peak hours of 7 A.M. to 9 A.M., 12 Noon to 1 P.M. and 4 P.M. to 6 P.M. In addition, the Fourth Street Bridge is closed to navigation from 8 P.M. to 4 A.M., except when required to be opened for urgent ship passage.

Total expense for the past year, $124,075.70; total average employments, 18.

(d) Operation and maintenance of Broadway Tunnel. Total expense for past year, $43,056.21; total average employments, 4.

BUREAU OF BUILDING REPAIR

(a) Repair of 314 buildings under jurisdictional control of the Department of Public Works for such services. Total annual expense, $1,623,144; average employments, 89.

(b) Maintenance and repair of public buildings through work order from other jurisdictions. Total annual expense was $992,664; average employments, 93.

(c) Inspection and survey of public buildings. Total annual expense $11,879; total employments, 2.

(d) Operation, custodial and/or maintenance services for 32 public buildings. Total annual expense, $569,247; normal employments, 126.

(e) Painting traffic markings on street pavements. Total annual expense, $ 192,695; total lineal footage painted, 3,548,568; normal employments, 21.

(f) Supervisory services of Superintendent and Assistant Superintendents, at a total salary of $24,300.

BUREAU OF STREET CLEANING

(a) Clean and patrol 804 miles of improved streets. Total annual expense $1,746,046 of which about $375,000 is estimated as avoidable expense caused by carelessness, such as by pedestrians; droppings from overloaded or defective truck bodies; sweepings from sidewalks and buildings; and debris from construction operations. Normal employments, 333.

(b) Educational programming to induce property owners and citizens generally to refrain from carelessly disposing of their refuse in public places.

(c) Planting and maintenance of streetside plantings. Existing growth includes 5377 trees, 21 acres of shrubs, and 33 acres of ground cover. Annual expense, $84,812; employments, 15.

RAINFALL

Rainfall has considerable bearing upon the extent and nature of field operations during winter months. The annual rainfall for San Francisco, as recorded by the Federal Weather Bureau from June 30, 1955 to July 1, 1956 amounted to 27.16 inches as compared to a rainfall of 15.74 inches in 1954-55. Monthly precipitation, in inches, was as follows:

July, 1955	0.02	January, 1956	8.72
August	Trace	February	2.03
September	0.02	March	0.12
October	0.03	April	1.68
November	2.38	May	0.68
December	11.47	June	0.01

TABLE A

AUTOMOTIVE VEHICLES AND SPECIALIZED PORTABLE EQUIPMENT ON HAND

Type	Sewer Repair and Sewage Treatment	Street Cleaning	Street Repair	Building Repair	Total
A. AUTOMOTIVE VEHICLES					
1 Passenger Cars	8	5	6	12	31
2 Light Trucks					44
Pickup	2	1	6	11**	
Panel	-	1	-	5	
Stake	1	-	-	-	
Express	1	-	-	9*	
Utility	-	1	-	5	
Flat Bed (Fire Truck)	-	-	1	-	
3 Dump Trucks	4	30	20	1	55
with compressor	-	-	2	-	2
with mech. loader	-	8	1	-	9
4 Low Bed Truck	-	-	1	-	1
5 Truck with Compressor	1	-	4	-	5
with Dump Body (no hoist)	-	-	2	-	2
6 Truck with Crane	6	-	-	-	6
7 Truck with Water Tank	-	2	-	-	2
8 Walk-in Truck	1	-	-	1	2
9 Special Traffic Stripping Unit (Van Type)	-	-	-	1*	1

TABLE A - continued

Type	Sewer Repair and Sewage Treatment	Street Cleaning	Street Repair	Building Repair	Total
A. AUTOMOTIVE VEHICLES - continued					
10 Eductors	10	-	-	-	10
11 Motor Sweepers	-	10	-	-	10
12 Motor Flushers	-	8	-	-	8
TOTALS	34	66	43	45	188

NOTE:

*Bureau of Engineering equipment operated by Bureau of Building Repair.

**Includes one Bureau of Engineering truck operated by Bureau of Building Repair.

B. SPECIALIZED PORTABLE EQUIPMENT					
1 Bitumal Trailer Unit	-	-	5	-	5
2 Blower Unit	4	-	-	-	4
3 Burner, Flame Gun	-	1	1	-	2
4 Compressor, on Trailer	4	-	1	5	10
on Castors	1	-	-	-	1
Spare	-	-	2	1*	3
5 Concrete Mixer	1	-	-	1	2
6 Concrete Saw, on Trailer	-	-	1	-	1
7 Generator on Trailer	-	-	2**	-	2
8 Grader (power)	-	-	1	-	1
9 Gunite Unit, on Trailer	1	-	-	-	1
10 Hoist, electric	2	-	-	-	2
11 Hoist, sewer cleaning	12	-	-	-	12
12 Heater Planer	-	-	1	-	1
Heater Surface	-	-	1	-	1

TABLE A - continued

Type	Sewer Repair and Sewage Treatment	Street Cleaning	Street Repair	Building Repair	Total
B. SPECIALIZED PORTABLE EQUIPMENT - continued					
13 Lawnmower, Hand	-	2	-	-	2
Power	3	1	-	-	4
14 Forklift	1	-	-	-	1
15 Lighting Unit	3	-	-	-	3
16 Mosquito Exterminator on Trailer	1	-	-	-	1
17 Motor Scooter	2	-	-	-	2
18 Mud Jack	-	-	1	-	1
19 Paint Striper on Trailer					
(bead) hand	-	-	-	1*	1
propelled	-	-	-	1*	1
20 Paver, asphalt	-	-	1	-	1
21 Pump, electric	3	-	-	-	3
gas	6	-	-	-	6
on trailer	2	-	-	-	2
Sump	-	-	-	1	1
22 Roller (power)	-	-	4	-	4
23 Sand Loader	-	-	1	-	1
24 Sand Blaster	-	-	1	-	1
25 Saw, Chain, Gasoline	-	1	1	-	2
Electric	-	-	2**	-	2
26 Sewer Cleaning Unit,					
on trailer	1	-	-	-	1
portable	1	-	-	-	1
27 Sickle, power	1	-	-	-	1
Sickle, bar	-	1	-	-	1
28 Sprayer, (Horticulture) on trailer	-	1	-	-	1

TABLE A - continued

Type	Sewer Repair and Sewage Treatment	Street Cleaning	Street Repair	Building Repair	Total
B. SPECIALIZED PORTABLE EQUIPMENT - continued					
29 Steam Cleaner	1	-	-	-	1
30 Tilt Trailer, Flat bed	-	-	1	-	1
31 Tool Box, on trailer	26	5	-	-	31
32 Tractor, and loader	-	-	1	-	1
with crane	-	-	1	-	1
with bulldozer	-	-	1	-	1
33 Trailer Chassis	6	-	-	-	6
34 Weed Sprayer, on Trailer	-	-	1	-	1
35 Welding Unit, on trailer	1	-	-	1	2
spot	-	-	-	2	2
TOTALS	83	12	31	13	139

NOTE:

*Bureau of Engineering equipment operated by Bureau of Building Repair.

**Civilian Defense equipment.

TABLE B

RENTED AND HIRED TRUCKS IN USE

Bureau	Hired Truck (with Driver)	Rented Truck (without Driver)
Sewer Repair & Sewage Treatment	10	-
Street Repair	7	-
Street Cleaning	1	-
Building Repair	1	13
TOTALS	19	13

NOTE:

13 of the above Hired Trucks are programmed to be replaced next year with City purchased equipment.

TABLE C

CHANGES IN PERSONNEL FROM PREVIOUS YEAR

Bureau		Change
SEWER REPAIR & SEWAGE TREATMENT		
(a) Addition of 1 Water Chemist for detection of explosive and noxious gases		1
(b) Addition of 1 Operating Engineer for Sewage Pump Stations		1
STREET REPAIR		
(a) Decrease of 2 Operating Engineers not needed at New Asphalt Plant		-2
(b) Decrease of 2 laborers due to elimination of one Crack Sealing Crew		-2
(c) Decrease of 1 Watchman due to elimination of one shift at 4th Street Bridge		-1
STREET CLEANING		
(a) Increase of one gardener in street cleaning		1
(b) Increase for additional function of Streetside Planting:		
Foreman Gardener	1	
Subforeman Gardener	1	
Gardeners	12	
Chauffeurs	1	15
BUILDING REPAIR		
(a) Increases due to reduction in extended work week:		
Watchman	1	
Janitors	4	
Elevator Operator	1	6
(b) Increase due to new functions:		
Inspection-Survey of Public Buildings:		
Mechanical Engineer	1	
Senior Architectural Draftsman	1	
Janitorial Services at 150 Otis Street:		
Working Foreman	1	
Janitor	1	
Janitorial Services at 604 Montgomery Street:		
Janitor	1	5
TOTAL NET CHANGE		24

TABLE D

POSITIONS ALLOWED IN BUREAU BUDGET FISCAL YEARS 1951-52 TO 1955-56 INCLUSIVE

	1951 1952	1952 1953	1953 1954	1954 1955	1955 1956
BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT					
Sewer Repair	136	130	123	123	124
Sewage and Waste Treatment	*	*	*	102	102
Pumping Stations	8	8	8	11	12
Totals	144	138	131	236	238

* Transferred December 3, 1954 to the Bureau of Sewer Repair without change in number of personnel.

	1951 1952	1952 1953	1953 1954	1954 1955	1955 1956
BUREAU OF STREET REPAIR					
Street Repair	134	131	151	148	144
Bridges and Tunnels	23	23	24	24	23
Interdepartmental Service	50	36	10	--	--
Totals	207	190	185	172	167
BUREAU OF STREET CLEANING					
Street Cleaning	332	332	332	332	333
Streetside Planting	*	*	*	*	15
As Needed Service	25	25	25	25	25
Totals	357	357	357	357	373

*Transferred July 1, 1955 to Bureau of Street Cleaning

	1951 1952	1952 1953	1953 1954	1954 1955	1955 1956
BUREAU OF BUILDING REPAIR					
Building Repair	125	157	168	175	186
Traffic Painting	*	*	21	21	21
Interdepartmental Service	177	155	130	134	134
Totals	302	312	319	330	341

* Transferred July 1, 1953 from Interdepartmental Service

	1951 1952	1952 1953	1953 1954	1954 1955	1955 1956
TOTAL FOR MAINTENANCE AND OPERATION	1,010	997	993	1,095	1,119

NOTE: Interdepartmental and As Needed Services are not established as continuing positions but are for services as required when funds are provided for the purpose involved.

TABLE E

SUMMARY OF EXPENDITURES

Bureau	Expenditure from Bureau's Budgeted Funds	Expenditures from Funds of Other Sources	Total Expenditures
(a) Sewer Repair and Sewage Treatment	$ 1,824,622.20	$ 4,634.21	$ 1,829,256.41
(b) Street Repair	* 1,415,454.94	161,337.57	* 1,576,792.51
(c) Building Repair	2,405,088.43	1,008,841.04	3,413,929.47
(d) Street Cleaning (Including Street-side Planting)	1,824,802.01	52,047.87	1,876,849.88
	$ 7,469,967.58	$ 1,226,860.69	$ 8,696,828.27
Less expenditures made from budgeted funds and reimbursed			* 288,932.20
TOTAL NET EXPENDITURES			$ 8,407,896.07

*Includes $60,175.79 of retirement charges applicable to other Special Road Improvement Fund functions (Gas Tax).

BUREAU OF BUILDING REPAIR

W.C. Zecher, Superintendent

The Bureau of Building Repair is a service organization of the Department of Public Works with a primary function to budget for and provide the maintenance and repair of 314 City and County Buildings which are under the jurisdiction of the Department of Public Works:

Secondary functions of this Bureau include the responsibility to:

(1) Budget for and provide operational service and/or custodial service and supplies for 32 buildings. This responsibility required the full-time service of 126 employees during the year; an increase of 9 employments over the previous year. Six of the new employments were added in lieu of the extended work week and three new employments were added to service 1 building at 604 Montgomery Street and 2 buildings at 150 Otis Street as a result of increases in function during the year.

(2) Repair and maintain other City Buildings by Work Order Procedure. The bureau received 16,567 repair requisitions, involving 19,241 man days of work during the year, from the Board of Education for the 150 buildings under its jurisdiction. Other departments with smaller physical plants required proportionately smaller number of repairs.

(3) Budget and provide labor, materials, supplies and contractural services for street traffic painting. Chart A of this report shows the units of work and cost for the year.

The title and location of the above indicated buildings and the description of traffic paint operations are listed in the Bureau of Building Repair's section of the Annual Report for 1954-55.

PERSONNEL

The organization chart included as part of this report shows the number and types of permanent personnel allowed to carry out the program of the Bureau during the fiscal year 1955-56. In addition, various numbers of temporary personnel are employed to meet seasonal demands for interdepartmental work.

This organization chart shows the twelve principal divisions of the Bureau, an increase of one Division over the previous year. The inspection and survey division was added for the purpose of assisting the Bureau in fulfilling its responsibilities by:

(a) Insuring that those concerned have such knowledge of the conditions of physical property as will enable appropriate action to be taken at the proper time for safety and preservation of property.

(b) Avoiding the extra expense of major repairs or replacement with more careful attention to routine maintenance and repair.

(c) Providing detailed information for estimating cost of maintenance and repair work.

(d) Classifying work according to degree of urgency, so as to permit intelligent preparation of budgets.

(e) Providing technical consultation and assistance to the operating activities in the appropriate maintenance and repair of properties.

(f) Providing successive reports on all structures and utilities so as to form a consecutive historical record of essential facts relating to maintenance and repair work and their costs.

FACILITIES

Shop and storage space at the Maintenance Yard at 2323 Army Street include separate facilities for each of the nine maintenance and repair divisions of the Bureau. Since 1953, the work load and responsibilities of the Bureau have increased to the point where the present space allowed is insufficient for its needs.

VEHICLES AND PORTABLE EQUIPMENT

The Bureau has 47 trucks for the transportation of personnel, materials, tools and portable equipment. The City owns 33, rents 13 and hires one truck with driver. The number of automobiles and trucks equipped with suitable tools and equipment allowed each maintenance and repair division are listed under the caption of "Maintenance and Repair Organization."

MAINTENANCE AND REPAIR ORGANIZATION

The organization chart shows the number of employees in each class for each division. The following tabulation gives a distribution of employments and vehicles in the nine maintenance and repair divisions.

Employments marked with asterisk (*) are as required for miscellaneous repair of public buildings, including schools. Number of employments is enumerated wherever the employee has attained permanent Civil Service tenure in this department. The employments are not established as continuing positions, but "as needed" when the services are required and the funds are provided.

PLUMBING DIVISION

(a) Personnel

General Foreman (Budgeted)		1
Plumbers (Budgeted)		10
Plumbers (Interdepartmental)		17*
	Total	28

The foregoing 10 budgeted plumbers are usually assigned to the following locations:

San Francisco Hospital	3
Laguna Honda Home	2
Fire Houses and Police Stations	1
Hall of Justice	1
City Hall	1
County Jail #2 and #4	0.5
Department of Public Works Buildings as needed	1.5

(b) Vehicles

Coupe automobile		1
Trucks (City - owned)		4
Trucks (Rented)		3
	Total	8

STEAMFITTING DIVISION

(a) Personnel

General Foreman (Budgeted)		1
Steamfitters (Budgeted)		7
Steamfitters (Interdepartmental)		8*
	Total	16

The foregoing 7 budgeted steamfitters are usually assigned to the following locations:

San Francisco Hospital	3
Laguna Honda Home	1
City Hall	1
Hall of Justice	1
Fire Houses and Police Stations	1

(b) Vehicles

Coupe automobile		1
Trucks (City - owned)		2
Trucks (Rented)		1
	Total	4

SHEET METAL DIVISION

(a) Personnel

General Foreman (Budgeted)	1
Sheetmetal Worker (Budgeted)	1
Sheetmetal Workers (Interdepartmental)	15*
Total	17

The foregoing budgeted sheetmetal worker is usually assigned to Department of Public Works Buildings as needed.

(b) Vehicles

Coupe automobile	1
Trucks (City - owned)	2
Trucks (Rented)	1
Total	4

ELECTRICAL DIVISION

(a) Personnel

General Foreman (Budgeted)	1
Electricians (Budgeted)	5
Electricians (Interdepartmental)	15*
Foreman Electrician (Interdepartmental)	2*
Armature Winder (Interdepartmental)	3*
Total	26

The foregoing 5 budgeted electricians are usually assigned to the following locations:

San Francisco Hospital	1
City Hall	1
Hall of Justice	1
Southeast Sewage Treatment Plant	1
North Point Sewage Treatment Plant	1

(b) Vehicles

Coupe automobile	1
Trucks (City - owned)	5
Trucks (Rented)	1
Total	7

CARPENTRY DIVISION

(a) Personnel

General Foreman (Budgeted)	1
Carpenters (Budgeted)	6
Laborers (Budgeted)	2
Foreman Carpenters (Interdepartmental)	2*
Carpenters (Interdepartmental)	21*
Total	32

The foregoing 2 budgeted laborers are usually assigned to the hired truck and the carpenter shop as needed. The foregoing 6 budgeted carpenters are usually assigned to the following locations:

San Francisco Hospital	2
Laguna Honda Home	0.5
Youth Guidance Center	0.5
Fire Houses and Police Stations	1
City Hall	1
Hall of Justice	1

(b) Vehicles

Coupe automobile	2
Truck (City - owned)	1
Trucks (Rented)	2
Truck and driver (Hired)	1
Total	6

CEMENT DIVISION

(a) Personnel

General Foreman (Budgeted)	1
Cement Finisher (Budgeted)	1
Cement Finishers (Interdepartmental)	13*
Plasterers (Interdepartmental)	3*
Tile Setter (Interdepartmental)	1*
Total	19

The foregoing budgeted cement finisher is usually assigned to Department of Public Works buildings as needed.

(b) Vehicles

Trucks (City - owned)	6
Trucks (Rented)	2
Total	8

LOCKSMITH DIVISION

(a) Personnel

Foreman (Budgeted)	1
Locksmiths (Interdepartmental)	9*
Total	10

(b) Vehicles

Coupe automobile	1
Trucks (City - owned)	1
Trucks (Rented)	1
Total	3

GLAZING DIVISION

(a) Personnel

Foreman (Budgeted)	1
Glazier (Budgeted)	1
Glaziers (Interdepartmental)*	4
Total	6

The foregoing budgeted glazier is usually assigned to Department of Public Works Buildings as needed.

(b) Vehicles

Coupe automobile	1
Trucks (City - owned)	2
Trucks (Rented)	1
Total	4

PAINTING DIVISION

(a) Personnel

General Foreman (Budgeted)	1
Working Foremen (Budgeted)	4
Painters (Budgeted)	30
Working Foremen (Interdepartmental)	2*
Painters (Interdepartmental)	19*
Total	56

Three of the foregoing 4 budgeted working foremen painters are usually assigned to street traffic painting and one is usually assigned to the San Francisco Hospital.

The foregoing 30 budgeted painters are usually assigned to the following locations:

Street Traffic Painting	18
San Francisco Hospital	6
Laguna Honda Home	2
City Hall	1
Sewage Treatment Plants	2
Department of Public Works Buildings as needed	1

(b) Vehicles

Coupe automobile	1
Trucks (City - owned)	10
Truck (Rented)	1
Total	12

STREET TRAFFIC PAINTING

CHART A

Classification	Unit	Amount	Cost	Unit Cost
Traffic line striping	Lineal Mile	376.67	$34,867.82	$92.57
Traffic line spotting	Lineal Mile	54.96	4,448.73	80.94
Intersections - General				
(a) Crosswalks (including words)	Lineal Feet	404,261	45,225.99	.1119
(b) Guidelines (including words)	Lineal Feet	54,687	6,964.37	.1273
School Crosswalks (including words)	Lineal Feet	190,344	29,649.46	.1558
Buz Zones (including words)	Lineal Feet	136,082	14,355.07	.1055
Parking Stalls				
(a) Diagonal	Number of Stalls	2,163	1,816.03	.8396
(b) 4-foot cross	Number of Stalls	4,878	3,356.60	.6881
Railroad crossings	Lineal Feet	9,350	904.59	.0967
Curb Painting				
(a) General	Lineal Feet	434,069	34,100.15	.0786
(b) Taxi	Lineal Feet	6,587	829.47	.1259

Total Cost. . . . . $ 176,518.28

The cost shown is the direct cost including working foreman, labor, materials, supplies and contractural service corresponding to the Bureau work program and budgeted funds.

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

B. Benas, Superintendent

The Bureau of Sewer Repair and Sewage Treatment maintains and repairs the sewerage system; operates and maintains sewage pumping stations and treatment plants; and regulates and controls industrial wastes discharged to sewers. Activities pertaining to the sewerage system and pumping stations are under the Sewer Repair Division. The treatment plants and control of industrial wastes discharge are under the Sewage and Waste Treatment Division.

In addition, the Sewage and Waste Treatment Division gave advisory and technical service to other departments of the City as listed below:

Department of Public Health

On operation of sewage treatment plant at Hassler Health Home in San Mateo County

Recreation and Park Department

On operation of sewage treatment plant in Golden Gate Park

Sheriff's Department

On operation and improvements to sewage treatment plant at County Jail No. 2 in San Mateo County

Public Utilities Commission

On starting procedures and operation of new sewage treatment plant at San Francisco International Airport in San Mateo County

Unusually heavy rainfall during December (11.47" versus 4.07" normal) and January (8.72" versus 4.03" normal) severely taxed bureau facilities as indicated below:

Sewer Repair

More than normal complaints, stoppages and breaks required services of all available personnel and equipment and considerable increase in overtime

Pumping Stations

Large quantities of sand and debris had to be removed to keep the stations in operation

Treatment Plants

Operation was not seriously affected other than the need for handling large quantities of grit and screenings

Budgeted employments for the fiscal year 1955-56 were 124 for Sewer Repair, 12 for Pumping Stations, and 102 for Sewage and Waste Treatment, totalling 238. These employments were supplemented by ten hired chauffeurs for Sewer Repair and ten maintenance personnel for Sewage Treatment from other Bureaus and Departments.

Walter B. Jones, Senior Civil Engineer, was appointed on December 27, 1956 as head of the Sewage and Waste Treatment Division.

John Murphy, General Foreman, Sewer Connections and Repair, was appointed on December 1, 1955 to Sewer Repair.

The Bureau lost the valued services of the following employees through retirement or death:

Name	Position	Service Years	Date
Retired			
F. E. Bignami	General Foreman Sewer Repair	20	12-1-55
S. Perasso	Laborer Sewage Treatment	18	12-1-55
J. A. Roche	Laborer Sewer Repair	22	1-1-56
E. A. Cline	Junior Operating Engr. Sewage Treatment	5	3-1-56
Died			
J. A. Bella	Cribber Sewer Repair	14	11-7-55
J. Sullivan	Cribber Sewer Repair	13	4-23-56

On June 30, 1956 the following held supervisory positions in the Bureau:

SEWER REPAIR

E. R. Bunting	Assistant Superintendent
W. P. Juzix	Assistant Superintendent
W. Corwell	General Foreman
B. Crotty	General Foreman
J. Murphy	General Foreman

SEWAGE PUMPING STATIONS

P. A. Esposito	Assistant Engineer I Electrical

SEWAGE TREATMENT PLANTS

W. B. Jones	Senior Civil Engineer

North Point

K. Fraschina	Superintendent
W. C. Jow	Chemist
W. J. Angenent	Chief Operating Engineer

Richmond-Sunset

B. Martin	Superintendent
T. S. Skillington	Chief Operating Engineer

Southeast

J. H. Crafts	Superintendent
A. E. Bagot	Chemist
G. J. Mallick	Chemist
R. M. Davidson	Chief Operating Engineer

INDUSTRIAL WASTE

C. P. Ferraris	Assistant Engineer II, Mechanical

Close liason is maintained with the Bureau of Engineering on planning pumping and treatment plants and sewer system improvements, and on major repairs.

SEWER REPAIR DIVISION

ORGANIZATION

The Sewer Repair Division cleans sewers and catch basins, maintains and repairs main sewers and structures, installs and repairs side sewers, tests for explosive and other gases, and operates and maintains sewage pumping stations.

There are over 800 miles of main sewers. Most of these are combined sewers handling both surface runoff and sanitary sewage. Separate sewers are located in part of the lower Market Street area and in other isolated areas. Main sewers range in size from 6 inch vitrified clay pipe to three-compartment reinforced concrete sewers with 7 1/2 foot by 10 foot compartments.

During rain excess storm flow is diverted to the bay or ocean through 16 outfalls. At 14 locations pumping stations boost sanitary flow and some storm runoff to main interceptors.

PERSONNEL

The 135 budgeted employees are assigned as follows:

GENERAL

2 Assistant Superintendents

SEWER REPAIR SECTION

3 General Foremen
1 Water Chemist
9 Chauffeurs
6 Brick Layers
10 Hod Carriers
45 Cribbers
17 Sewer Cleaners
30 Laborers

PUMPING STATION SECTION

1 Assistant Engineer, Electrical
3 Operating Engineers
8 Junior Operating Engineers

In addition, one Junior Engineer, Civil, and one Clerk-Typist are permanently assigned from other bureaus. Ten hired drivers work permanently under contract.

All division operations are supervised by the two Assistant Superintendents. The sewage pumping section is headed by the Assistant Electrical Engineer and the sewer maintenance and repair sections by the three General Foremen.

SEWER MAINTENANCE AND REPAIRS

Maintenance and repair activities are separated into nine work units based on type of work and classification.

Table I shows the work assigned each unit and personnel and equipment used.

Table II shows work distribution, total expenditures by work units and unit costs where applicable. Unit costs include general department overhead and prorated allowance for equipment.

SEWER CLEANING

Regular cleaning operations are scheduled mainly for sewers in known flat areas. Other work is in connection with complaints and main sewer repairs. Sewers are normally cleaned by the drag and bucket method operating between two manholes.

EDUCTOR OPERATIONS

A total of 16,945 catch basins were cleaned during the regular working hours in continuation of the program of regular cleaning started March 1955 and described on Page 114 of the 1954-55 Annual Report.

Two eductors were assigned to night operation from May 16th to June 22, 1956, to clean catch basins in downtown areas inaccessible during the day because of heavy traffic or parked vehicles. A total of 624 catch basins were cleaned in the areas north of Market and west of the Embarcadero to Taylor Street and the Civic Center, and south of Market from the Embarcadero to Valencia Street and the Channel.

Eductors for night operation were specially equipped with flood lights, flashing rear red light reflectorized warning signs, barricades and traffic cones. Operating crews were required to wear red flourescent safety vests and were given special instructions in night operation methods. Night operation will be scheduled yearly.

SERVICING COMPLAINTS

This section services complaints from the public and other sources, wets down main sewers and side sewer trenches, flushes pipe sewers which have become sluggish or temporarily plugged, and does all emergency work pertaining to the system. Four crews are on regular day shift and one crew on night shift. Weekend work is scheduled only in impending wet weather.

REPAIRING MAIN PIPE SEWERS

Main pipe sewer repair is continually required to repair breaks from scour, settlement, or poor house connections. These conditions are aggravated by winter rains which cause subsurface soil to wash away and result in caveins at the street level. Exceptionally heavy rains this winter caused considerable damage to the system. The largest cavein was on Larkin Street between Post and Geary where about 60 feet of pavement and a section of 3 foot by 5 foot brick sewer washed away. The sewer was replaced with a temporary corrugated iron pipe as reconstruction of a larger sewer is planned in the near future.

REPAIRING OF BRICK SEWERS AND STRUCTURES

Repairs are continually required to maintain the 76 miles of brick sewers. Most deterioration results from failure of the lime mortar originally used and from natural scour.

Main Brick Sewer Break
Larkin Between Post and Geary Streets

REPAIRING AND INSTALLING SIDE SEWERS

The side sewer from the building to the main sewer belongs to the property owner. By City Ordinance all installation and repair work under City Streets on side sewer connections must be performed by this Bureau except where side sewer construction is included with main sewer construction under public contract. Before any work is started the property owner deposits with the Central Permit Bureau the estimated cost for constructing the side sewer from the curb and connecting to the main sewer. Final payment covers only actual costs. The number of cribbers employed depends on the number of permits being processed.

GAS DETECTION SURVEY

This section tests sewer manholes, pumping station and treatment plants, and other miscellaneous structures for explosive gas, carbon monoxide, hydrogen sulphide, and oxygen deficiency. Natural gas leaks are reported to the gas utility company and testing is continued until the condition is corrected. Clogged sewers, loose bricks, and sludge deposits in manholes are reported to other sections.

Tests, testing methods, and equipment used are described in detail on pages 92-95 of the 1952-53 Annual Report.

During the fiscal year 7,871 manholes were tested: 384 (4.88%) contained explosive gases in concentrations from 0.1 to 1%, which is not considered dangerous; 71 (0.90%) contained dangerous gases in concentrations of over 1% explosive gas; 2 contained carbon monoxide at concentrations below .05%; and 6 manholes were found with an oxygen deficiency. Of the 2,502 manholes tested for hydrogen sulphide, none was found to have this gas present.

The gas detection unit was on night operation between May 16th and June 29, 1956 to survey downtown areas with heavy daytime traffic. During this period 1,717 manholes were tested, of which 12 contained dangerous concentration of over 1% explosive gas. Night testing service will be scheduled yearly.

REPAIRING AND MAINTAINING OUTFALL STRUCTURES

Outfall structures with tide gates which allow discharge of excess storm flow and prevent tidal backup must be repaired and repainted annually. This work is done mainly by contractural services by other bureaus or departments. Required work by this bureau is done by personnel temporarily assigned from other work units.

MISCELLANEOUS WORK

This work unit covers a number of miscellaneous functions such as yard service, placing barricades and warning lights and other work not regularly scheduled or normally a part of the work of other units.

STUDIES AND IMPROVEMENTS

A system of inventory control on tools and equipment on motor vehicles and tool boxes was initiated during the year. Standard lists were prepared for each unit and existing stocks inventoried and distributed to conform as closely as possible to the standards. Additions and replacements are entered as received to keep the inventory current. Major advantages of this method are (1) better control of tools and equipment (2) basis for replacement purchasing and (3) units always properly equipped for their specific functions.

A new system of work reporting was placed into effect to simplify work analysis and cost accounting.

Field operations were studied to determine what manual operations might be performed better mechanically.

Mapping of field operations was expanded to include catch basin cleaning, sewers cleaned, condition of brick sewers, and sewers requiring replacement.

SEWAGE PUMPING STATIONS

This section operates and maintains fourteen sewage pumping stations whose primary purpose is to boost sanitary flow and some storm run-off to main interceptors leading to treatment plants. Descriptive information for each of the sewage pumping stations may be found in the Annual Reports for 1952-1953, pages 86 to 92 inclusive; 1953-1954, page 96; and 1954-1955, pages 116 and 117, with exception of Fitzgerald Avenue Pumping Station which is given below.

FITZGERALD AVENUE PUMPING STATION

The Fitzgerald Avenue Pumping Station is located on the east side of Fitzgerald Avenue, south of Griffith Street and has a tributary area of 30 acres, mainly to the west and south.

The station was completed on November 11, 1955 at a cost of $90,607 and was placed in operation as a unit of the Southeast Collecting System on November 21, 1955, replacing the old temporary station which was removed from service on July 25, 1955.

Present daily flow is 25,000 gallons which is discharged through an 8-inch force main to Fitzgerald Avenue at Ingalls Street.

Equipment includes two 4-inch vertical, open shaft, single stage, centrifugal pumps, each rated at 240 gpm against a total dynamic head of 47 feet and driven by a 5 HP, 220 volt, 3 phase, 60 cycle electric motor at 1150 rpm.

PERSONNEL

Increase in the number of stations has made it necessary to revise personnel assignments. The city was divided into three districts corresponding to present districts which are tributary to the sewage treatment plants, with an operating engineer assigned to direct operation and maintenance of all stations within a district.

One additional operating engineer was employed when the district program was inaugurated, making a total of twelve employments in the station operations.

MAINTENANCE AND REPAIRS

Commercial Street

Replaced damaged battery and ground cable to engine of auxiliary pump, riser to #1 pump and foot valve to auxiliary pump. Repaired auxiliary pump and motor and recording kwh meter. Installed sump guard.

Fulton Street

Repaired seal water pump motor, main influent and effluent valves, sidewalk and sidewalk doors, float control, electric heater, discharge valves and risers to both pumps. Replaced damaged pressure switch to seal water system. Serviced flow meter.

Hunters Point

Repaired seal water line and leaks in station walls.

Hyde Street

Repaired both check valves to pumps, discharge line by-pass valve and seal water tank foundation. Removed damaged Venturi tube and metering equipment.

Lakeshore

Serviced flow metering equipment. Repaired exhaust fan motor and ducts, starter, float control, grates and automatic control circuits to both pumps.

LaPlace Canyon

Repaired force main and both pumps.

Marina

Replaced damaged float sprocket chain and liner to 24 inch emergency discharge valve.

Mariposa

Serviced flow metering equipment. Repaired electric heater, sump room locks, wall leaks and main influent valve. Removed damaged Venturi tube and flow metering equipment.

Park Merced

Serviced flow metering equipment. Repaired pump starters, seal water pump motor, float controls, grate bars and #4 pump.

Pinelake

Repaired fresh water line and door lock.

Sea Cliff No. 1

Repaired both motors, starters, #1 pump and recording ammeter.

Station was out of service from May 8 to May 18 and required emergency work to prevent discharge of raw sewage to Phelan Beach. This indicates the need for revisions which are being studied by the Bureau of Engineering.

Sea Cliff No. 2

Replaced damaged light switch, valve and mercury switches in sump room. Serviced flow metering equipment.

Vicente Street

Repaired hasps to sump doors and serviced main influent valve. Installed new ammeter, thermostat and heater.

EXPENDITURES

Total Salaries	$ 66,564
Electric Power	16,724
Maintenance	5,527
New Equipment	643
Supplies	2,352
Total Expenditures	$ 91,810

Individual station expenditures and unit cost data may be found in Table III.

SEWAGE AND WASTE TREATMENT DIVISION

The Sewage and Waste Treatment Division operates the North Point, Richmond-Sunset and Southeast Sewage Treatment plants and advises on the operation of sewage treatment facilities under the jurisdiction of other City departments. Other than for short period shutdowns for construction or repairs, the three plants operated continuously during the fiscal year, treating sewage from all parts of the City except limited areas along the bay shore. The unserved areas will be connected to the plants upon completion of the additional collecting sewers and pumping stations now under construction or planned for the future.

Two drainage areas listed below totaling 1,320 acres and contributing an average daily flow of 7 million gallons were added to the North Point Collection System during the fiscal year.

(a) The North Point Collecting Sewer, Section A, intercepts the Union, Greenwich and Green Street outfalls with a total drainage area of about 50 acres and diverts about 300,000 gallons daily.

(b) Alterations to the diversion structures at 5th and Howard, 7th and Howard and at 10th and Harrison Streets, completed October 1955, diverted about 6.7 million gallons daily from a drainage area of about 1,270 acres.

PERSONNEL

There was no change in the total number of Division personnel during the year. The following table shows distribution of plant personnel as of June 30, 1956, exclusive of the Senior Engineer in charge of the Division and the Industrial Waste Engineer.

Classification	North Point	Richmond-Sunset	Southeast
Superintendent	1	1	1
Chemist	1	0	2
Water Chemist	2	2	2
Clerk-Stenographer	1	1	1
Chief Operating Engineer	1	1	1
Operating Engineer	6	6	9
Junior Operating Engineer	15	5	25
Janitor	1	0	1
Laborer	4	3	5
Truck Driver	1	1	0
TOTALS	33	20	47

Major bacteriological work for the Division, requiring one Water Chemist, is centralized at the North Point laboratory. A limited amount of bacteriological work is also done at the Richmond-Sunset laboratory. Engineering design for improvements is performed by the Bureau of Engineering. Major repairs and maintenance requiring the services of specialized crafts are done by other bureaus of the Department and by the Purchaser's shops. The Recreation and Park Department maintains landscaping at all plants.

SEWAGE TREATMENT METHODS

Each plant provides primary treatment for the removal of oil, grease, floating material, grit and settleable solids. The effluent is chlorinated during designated seasons for bacterial disinfection before being discharged into the ocean or bay. Grit and screenings from the North Point and Southeast plants are hauled by truck to the garbage fill south of the county line. At the Richmond-Sunset plant screenings are incinerated and grit is hauled to a City dump.

At the Richmond-Sunset plant, sludge is digested in two-stage digestion, elutriated and dewatered by vacuum filtration. The filter cake is hauled to the City parks for use as a soil conditioner. Raw sludge collected at the North Point plant is pumped to the Southeast plant through a 10-inch diameter concrete-lined force main approximately six miles long. The sludge treatment facilities at the Southeast plant consist of raw sludge thickening, two-stage digestion, elutriation, vacuum filtration and flash drying. Part of the dried sludge was delivered to the Recreation and Park Department for use in the City's parks and squares. The balance was sold under contract at a price of $1.10 per ton to a prime contractor.

Flash drying is a process used by many industries for the separation of liquids from solids. Its function at the Southeast Sewage Treatment Plant is to reduce the moisture content of the filter cake and to convert it into a more usable form. The cake obtained from the filters is a semi solid containing approximately 30% dry solids and 70% water, which is about the limit for mechanical separation. At the present operating rate this corresponds to a cake weight of 4 to 5 tons per hour for 100 to 115 hours per week. By heat drying, the cake moisture content is further reduced to less than ten percent and the weight to approximately 1.5 tons per hour. The dry product, in contrast to the filter cake, can be: (1) readily handled by conventional solids handling equipment; (2) stored in large quantities; and (3) stored for extended periods of time.

There are three dryer units, each with an evaporation rating of 6,250 pounds of water per hour. Each unit consists of a furnace to provide heat and to deodorize exhaust gases; a mixer to mix recycled dried sludge with filter cake to properly condition the cake prior to drying; a cage mill to disperse the mixer discharge in the hot gas stream from the furnace; a drying tower in which the water is evaporated in 2 to 3 seconds; a cyclone separator and airlock to separate the dried solids from the water vapor and furnace gases; an air conveying system to transport dried material to storage; a vapor fan which draws gases from the furnace through the cage mill, drying tower and cyclone and discharges to the deodorizing section of the furnace; an exhaust fan which removes the excess combustion gases and water vapor from the furnace and discharges to the stack; and necessary electronic and pneumatic controls.

Sludge gas produced in the digestion process at the plant is used for fuel in the furnaces to the extent available. The dried sludge is delivered to the contractor in bulk and he is permitted to use the City's sacking machine under the terms of the contract.

TREATMENT PLANT OPERATION

Table IV summarizes data of flows, materials removed, chemicals added, products handled, and power and gas purchased for the three plants.

RESULTS OF OPERATION

Bay and ocean waters in the vicinity of the treatment plant outfalls and at nearby beaches remained in excellent condition during the fiscal year. Waters are safe for bathing along the ocean beach and nearby north shore beaches, and at Aquatic Park at all times except when storm overflow occurs during the winter season. Bay waters in the vicinity of Islais Creek continued to meet State Regional Water Pollution Control Board requirements.

COST OF OPERATION

Total expenditure for the fiscal year was $864,548. The cost was distributed as follows:

Personal Services	$563,313
Heat, Light and Power	128,330
Contractual Services	45,226
Materials and Supplies	126,488
Equipment	1,191

Based on a connected population of 760,000 the cost of operation was approximately $1.14 per capita.

IMPROVEMENTS

The following major improvements were made at the treatment plants during the fiscal year:

North Point Plant

Inadequate floor drainage was corrected at certain points in the Pretreatment and Administration Buildings, effluent filter and exhaust fan rooms. The elevation of the sand washers was raised.

Richmond-Sunset Plant

Work was commenced but not completed on a contract for the alteration of digester piping which will eliminate the necessity of single stage elutriation between digesters and will replace the bellows type gas meters with a Venturi meter. One of the two existing low pressure steam boilers which needed repairs was replaced by the two low pressure boilers which had been previously removed from the Southeast Plant. Fully automatic controls were provided and a low water and gas alarm system installed. The gas pressure to the boilers is raised above digester pressure by a centrifugal type blower.

Southeast Plant

Seven centrifugal pumps of identical design were installed under one contract, four for handling raw sludge and three for handling grit.

One pump of a new design was installed to handle grit.

One mechanically cleaned bar rack was remodeled to increase the frequency of cleaning, thus reducing the probability of the rack becoming clogged by occasional heavy loads of industrial wastes.

SPECIAL STUDIES AND INVESTIGATIONS

1. Completed

Comparison of organic coagulant with ferric chloride for sludge conditioning. Ferric chloride was found to be the more economical and effective coagulant.

Comparison of alkaline-permanganate with trichlorobenzene for screenings deodorizing. Alkaline-permanganate was found to be cheaper and as effective and was substituted for trichlorobenzene at the North Point Plant in October 1955.

Effect of biocatalytic additives on sludge digestion and grease liquefaction for the special Committee on Enzymes of the California Sewage and Industrial Wastes Association. The Conclusions of this committee, based on data from several cooperating laboratories, are to be published later.

Potability of domestic water supply at Marina Pumping Station, City Hall and Hall of Justice.

2. **Not Completed**

Optimum rate of pre-chlorination for odor control.

Variation in effluent chlorine demand and sulphides during daytime hours.

Re-evaluating effect of mechanical and air flocculation on sedimentation.

Re-evaluating factors affecting vacuum filtration including intermediate sludge elutriation and point of withdrawal from digesters.

Use of chromogenic bacteria as tracer organisms in tidal flow.

New volatile extractible acid test for sludge digestion control in cooperation with University of California.

3. **Continuous**

Bacteriological survey of shore waters.

Analysis of industrial wastes.

Source identification in leak and seepage complaints received by the Bureau.

AIR POLLUTION

The Richmond-Sunset Plant in cooperation with the Bureau of Air Sanitation, California State Department of Public Health, collects detailed records of wind direction and velocity, and frequency of various inversion layers; and makes a continuing survey of point sources. A sampling program along the ocean and Golden Gate shores, to determine the natural or base level of air pollutants reaching San Francisco during periods of westerly winds, is nearing completion. A control point, however, will be maintained and it is planned to extend the program to determine the extent of air pollution from various areas in San Francisco. The plant superintendent also acts as advisor to Supervisors William C. Blake and Clarissa S. Mc Mahon, Board members of the Bay Area Air Pollution District.

INDUSTRIAL WASTES

The program of sampling, analysis and check of industrial wastes continued during the year.

Industries in the Southeast Sewerage District which are located adjacent to the shore were surveyed to determine whether shore or sewer discharge is required. Continued check was made of waste discharge from slaughter house, packing and rendering plants. Some plants have improved conditions, others are taking the necessary steps to conform to ordinance requirements under orders issued by the Director of Public Works.

In other districts, investigations were limited to checking specific wastes and ordinance violations. Extensive work was done in the Fisherman's Wharf Area to determine the source of grease which caused sewer stoppages.

Testing of prototype garbage grinders for conformance with Ordinance requirements was continued.

JOINT SURVEYS WITH BUREAU OF ENGINEERING

Industrial plants and establishments in the North Point and Richmond-Sunset Sewerage Districts were surveyed as to type. The survey for the Southeast Sewerage District was completed in the 1954-55 fiscal year.

The types of industries and plants were divided and codified into six major and thirty-five sub-groups. Major groups are:

a. Animal by-product processing
b. Beverages
c. Chemical wastes
d. Food processing
e. Material by-products
f. Petroleum products

The results covering 3600 industries and establishments were tabulated and mapped by the Bureau of Engineering.

Piers and other facilities under the jurisdiction of or leased from the State Harbor Commission were surveyed to determine location of sanitary and industrial waste discharges to the Bay. This survey was made with the cooperation of the Chief Engineer of the State Harbor Commission.

TABLE I
WORK UNITS, CREWS AND EQUIPMENT
SEWER REPAIR DIVISION

Work Unit	FUNCTION	CREWS	EQUIPMENT
1	SEWER CLEANING Clean main sewers. Miscellaneous cleaning at pumping and treatment plants and other work	6 crews of 2 Sewer Cleaners 1 Laborer 1 hired Chauffeur	6 $1\frac{1}{2}$ ton trucks with tuggers, hoists, booms and cables 1 hired material truck
2	EDUCTOR OPERATIONS Clean catch basins, Pump down sumps, Wetdowns, Miscellaneous work	8 crews of 1 Chauffeur 2 Laborers	8 Eductors 2 Standby
3	SERVICING COMPLAINTS Service complaints Flush sewers Miscellaneous work	5 crews of 1 hired Chauffeur 1 Laborer 1 Sewer Cleaner	5 hired trucks
4	REPAIRING MAIN PIPE SEWERS	11 crews of 2 Cribbers bricklayers lay pipe as needed 4 hired Chauffeurs	Air compressor and tools Miscellaneous tools 4 hired material trucks (for work units 4, 5, 6)
5	REPAIRING BRICK SEWERS	4 crews of 1 bricklayer 2 Hodcarriers 2 crews of 1 Bricklayer 1 Hodcarrier	Bricklayers and miscellaneous tools

TABLE I - continued

Work Unit	FUNCTION	CREWS	EQUIPMENT
6	REPAIRING AND INSTALLING SIDE SEWERS	6 or more crews of 2 Cribbers as required	1 mobile truck with mounted air compressor Miscellaneous tools
7	GAS DETECTION SURVEY Test manholes for explosive and other gases Miscellaneous testing	1 crew of 1 Water Chemist 1 Laborer	1 route van Gas detection equipment
8	REPAIRING AND MAINTAINING OUTFALL STRUCTURES	None regularly assigned Work mainly by contractural services by others	None regularly assigned
9	MISCELLANEOUS WORK NOT REGULARLY SCHEDULED OR FORESEEN	None regularly assigned	None regularly assigned

TABLE II
SHOWING WORK DISTRIBUTION AND COSTS
SEWER REPAIR DIVISION

Work Unit		Per-Cent			Totals		Cost Per Unit
1	Sewer Cleaning	84	Cleaning sewers	$100,866		89,980 lin. ft. cleaned	$ 1.12
		16	Other work	19,767	$120,633		
2	Eductor Operations	70	Cleaning C/B's	119,192		17,569 C/B's cleaned	6.78
		30	Other work	50,825	170,017		
3	Servicing Complaints	56	Servicing complaints	67,837		6,742 Complaints	10.06
		44	Other work	54,001	121,838		
4	Repairing Main	100	Repairing sewers	189,146	189,146	6,247 lin. ft. pipe repaired at 499 locations	30.28
5	Repairing Brick Sewers	69	Repairing brick sewers	94,381		19,300 lin. ft. Sewer	4.89
		9	Repairing C/B's	12,629		258 Repaired C/B's	48.95
		10	Repairing M/H's	13,339		197 Repaired M/H's	67.71
		1	Repairing Conc. sewers	1,497		105 lin. ft. Sewer	14.26
		4	Building C/B's	5,075		8 C/B's built	634.00
		7	Building M/H's	9,016	135,937	15 M/H's built	601.00
6	Repairing and installing Side Sewers	21	Repairing S/S	24,012		125 S/S repaired	192.00
		2	Connections	2,473		49 Connections	50.00
		77	Installing S/S	89,867	116,352	497 Installed S/S	181.00
7	Gas Detection Survey	60	Testing M/H's	6,855		7,871 M/H's tested	0.87
		40	Misc. tests and other work	4,552	11,407		
8	Maintaining and Repairing Outfall Structures	100	Repairing and Maintaining Outfall Structures	971			Not Applicable
9	Miscellaneous work not regularly scheduled or foreseen				38,035		Not Applicable
	Total for Work Units 1 to 5 and 7 to 9			$787,984			
	Total for Work Unit 6			116,352			
		GRAND TOTAL			$904,336		

NOTES: C/B = Catchbasin M/H = Manhole S/S = Side Sewer (Side Sewer Funds paid by property owners)

TABLE III
SEWAGE PUMPING STATIONS
1955 — 1956

					Unit Cost Per Million Gallons Pumped Per						Expenditures					
						Contractual						Contractual				
Location	Drainage Area Acres	Average Lift, Feet	Pumping Efficiency %	Million Gallons Pumped	Salaries	Maintenance	Power & Light	Materials & Supplies	Equipment	TOTAL	Salaries	Maintenance	Power & Light	Materials & Supplies	Equipment	TOTALS
General	-	-	-	-	$ 1.75	$ .29	$ -	$ .09	$ .04	$ 2.17	$ 5,564	$917	$ -	$284	$ 91	$ 6,856
Commercial St.	93	20	42	303	65.16	1.61	3.40	.63	-	70.80	19,745	487	1,031	191	-	21,454
Fitzgerald Ave.	30	48	46	6	156.83	13.33	20.33	24.17	42.67	257.33	941	80	122	145	256	1,544
Fulton St.	82	56	55	63	17.98	3.89	9.57	2.93	-	34.37	1,133	245	603	184	-	2,165
Hunters Point	90	34	57	134	23.72	.45	4.16	.45	1.10	29.88	3,179	60	557	60	148	4,004
Hyde St.	14	29	38	23	108.26	12.61	5.04	.74	-	126.65	2,490	290	116	17	-	2,913
Lakeshore	152	96	48	87	13.18	3.06	13.36	1.25	-	30.85	1,147	266	1,162	109	-	2,684
LaPlace Canyon	40	59	58	9	77.56	84.00	6.33	2.44	-	170.33	698	756	57	22	-	1,533
Marina	1,125	38	54	1,952	7.97	.23	3.19	.17	-	11.56	15,563	453	6,229	326	-	22,571
Mariposa	150	53	53	221	14.59	2.37	6.63	1.72	.67	25.98	3,225	523	1,465	381	148	5,742
Park Merced	212	123	39	150	19.81	3.61	18.80	1.10	-	43.32	2,972	542	2,820	164	-	6,498
Pinelake	3	61	43	3	244.67	4.33	75.00	42.66	-	366.66	734	13	225	128	-	1,100
Sea Cliff No. 1	4	49	41	3	235.33	265.33	7.67	19.67	-	528.00	706	796	23	59	-	1,584
Sea Cliff No. 2	83	94	36	92	78.24	.68	17.28	.90	-	97.10	7,198	63	1,590	82	-	8,933
Vicente St.	52	56	58	120	10.58	.30	6.03	1.67	-	18.58	1,269	36	724	200	-	2,229
TOTALS	-	-	-	3,166	$ 21.02	$ 1.75	$5.28	$ .74	$ .21	$ 29.00	$66,564	$5527	$16,724	$2352	$643	$91,810

TABLE IV

SUMMARY OF TREATMENT PLANT OPERATIONS

Fiscal Year 1955-56

	North Point	Richmond-Sunset	Southeast
Sewage Flow, Million gals.			
Total (a)	15832	4808	6023
Max. day, wet weather	101.5	19.5 (b)	29.6 (b)
Max. day, dry weather	60.2 (c)	16.4	27.8
Avg. day	43.4	13.1	16.5
Max. rate, wet weather	152	23.3 (b)	48.0 (b)
Max. rate, dry weather	79	28.6	52.0
Screenings, cu.ft.			
Total	27118	8720	22332
Max. day	212	44.4	419
Per million gallons	1.7	1.9	3.7
Grit, cu. ft.			
Total	74925	47250	35554
Max. day	1269	405	1500
Per million gallons	4.7	10.4	5.9
Chlorination, lb. (d)			
Pre	506880	143175	18580
Post	727900	339039	141770
Process water (effluent)			8640
Total	1234780	482214	168990
Per million gallons (dry weather)	102	111.1	112
Sludge Solids, M lb. (dry)			
From sedimentation	28415 (e)		27857 (f)
To digesters (g)		6855	47567
Filter cake		1138	11808
Dried Sludge			10673
Ferric Chloride			
Total lbs.		47069	553220
% used based on filter cake solids		4.17	4.58
Gas Production, M cu.ft.			
Total		60490 (h)	239204
Avg. day		166 (h)	654

TABLE IV - continued

	North Point	Richmond-Sunset	Southeast
Power and Gas Purchased			
Power, total M kwh	5013.6	1766.4	4836.0
Power, avg/mo., M kwh	417.8	147.2	403.0
Natural gas, total, C cu.ft.	93178	41446 (i)	277423 (j)
Natural gas, avg/mo. C cu.ft.	7765	3454	23119
Hauling			
Trips, grit and screenings	592		337
Trips, grit and filter cake		793	
Trips, dried sludge			419

NOTES

(a) For 365 days of operation at North Point; 365 days of operation at Richmond-Sunset; 366 days of operation at Southeast.

(b) Flow restricted during storms to avoid overloading grit handling facilities.

(c) January 16th, a clear day following a period of heavy rainfall.

(d) Pre-chlorination continuous. Post-chlorination: North Point, March through November; Richmond-Sunset, continuous except during storms; Southeast, April through October. North Point also post-chlorinates during winter months after ten consecutive days without precipitation.

(e) Unusually heavy winter storms caused by-pass of large quantities of solids. Also sewage contributing to the increased flow carries a smaller percentage of solids than the previous flow.

(f) Includes recirculating load from raw sludge thickening and digester sludge elutriation overflows.

(g) From raw sludge thickening.

(h) Estimated from volatile solids in raw sludge to digesters - meters inoperable.

(i) Higher than normal use during installation of new boilers.

(j) Increase due to low digester gas production in winter months and higher instantaneous demand of new boilers.

BUREAU OF STREET CLEANING

S.J. Sullivan, Superintendent

The primary function of the Bureau of Street Cleaning is to keep the 1640 curb miles of improved streets free from litter and debris. In addition, the 85 curb miles of traffic dividing strips and channelization islands are also serviced. Other miscellaneous work includes the cleaning of tunnels; the weeding of vacant city-owned lots and easements; the clean-up of debris after vehicular collisions; the removal of truck spillages; the cleaning of city-owned monuments; and the removal of litter after all parades and civic celebrations.

A new responsibility was assumed by the Bureau during the year with the transfer of the Street Tree Planting program from the Recreation-Park Department to the Department of Public Works. Details of the work and personnel used in this program will be found in a subsequent section of this report.

OPERATIONS

GENERAL STREET CLEANING

This work is done by four methods, or a combination of these: 133 blockmen sweepers who individually patrol assigned commercial sections of the City; 11 gang sweeping crews in assigned residential districts; a fleet of 10 motor sweepers; and 8 motor flushers. A detailed description of these methods was given in the 1954-55 Annual Report. This work is supplemented by the operation of 10 litter control trucks which are primarily used for emergency clean-ups, answering of complaints and the periodic patrolling of known "paper pockets" throughout the City.

LITTER PATROL

An innovation to implement the efficiency of the Bureau operations was received but not equipped in time for its planned use during the fiscal year. This is a one-man litter patrol truck which will be used for emergency pickup operations. It will be equipped with a two-way mobile radio so that it can be directed to emergency clean-up locations which are radioed into the office from either of the four District Directors or are received by telephone.

CLEANING TUNNELS

The cleaning of the Broadway and Stockton Street vehicular and pedestrian tunnels is a periodic function of this Bureau.

The Stockton Street tunnel lower walls are glazed tile and upper sections are smooth concrete, and are washed about every six weeks. Ground water leakage through these walls deposits an efflorescence which is unsightly and difficult to remove. Studies are being made of a drainage system to eliminate this condition.

The Broadway Tunnel walls are surfaced with glazed tile to the spring line and unglazed tile above. The lower section becomes coated with traffic dirt necessitating a weekly washing which is done by two flushing trucks - one spraying a detergent and the other following up by spraying clear water to clean the surface. During the winter months, it is sometimes necessary to remove the mud on the lower walls by manual labor prior to the washing. In the past year the entire wall surface, including the overhead crown section, was washed three times. This is accomplished by means of improvised spray nozzles using a special cleaning solvent followed by a clear water wash. A new cleaning unit developed jointly by Street Cleaning personnel and Shop No. 2 of the Purchaser's office is now on order for use during the next fiscal year.

PREVENTIVE STREET CLEANING

The Chamber of Commerce "Committee to Keep Streets Clean" continued its excellent campaign during the year, awarding trophies each month to the cleanest district and school area. The Board of Education co-operated with this Committee by placing articles about litter-bugs in the school publications.

On June 3, 1956 a one-hour parade up San Francisco's famed Market Street opened a campaign termed "Stop, Look and Glisten". This was sponsored by the Junior Chamber of Commerce in an attempt to have the people of the City clean-up and paint up their premises, prior to the Republican Convention, as well as the many other conventions to be held during the year.

WASTE RECEPTACLES

This Bureau has not approved the use of wire baskets on sidewalk areas since they are not practical or attractive. The recent development of an expanded metal type basket which is reasonable in cost and will hold small bits of paper and litter will possibly result in the purchase of a few of this type receptacle on an experimental basis.

There is a constant demand from the people for more receptacles on the City sidewalks. These requests are carefully screened as to conditions in the particular area in which they are desired. In some districts the receptacles are being illegally used as garbage cans so that the placement of new cans in these localities has been discontinued.

RETIREMENT BANQUET

On May 31, 1956 the Bureau personnel paid their respects to those who had retired during the past year by tending them with a banquet. At this dinner the following persons were honored:

J. Arbunich	Laborer	12 years
S. Capriolo	Sub-Foreman	28 years
J. Chiotti	Laborer	11 years
H. Conklin	Garageman	10 years
L. Easterday	District Director	32 years
L. Ghigliazza	Laborer	13 years
D. Gombini	Laborer	12 years
J. Hogan	Laborer	18 years
P. Keane	Laborer	18 years
J. Schimelpfenig	Chauffeur	28 years
M. Valverde	Laborer	2 years

STREET TREE PLANTING DIVISION

On July 1, 1955 this Bureau assumed the responsibility of the City's Street Tree Planting Program after the passage of an Ordinance which transferred the jurisdiction of the program from the Recreation-Park Department to the Department of Public Works. This Ordinance specifies that the Department shall:

1. Develop and establish an Official Street and Sidewalk Program including rules and regulations pertaining to same.
2. Plant, maintain and remove trees, shrubs or ground cover in street or sidewalk areas in accordance with the Program.
3. Request budget funds adequate for maintenance and an orderly planting program.
4. Encourage proper planting and maintenance of trees by private persons.

STREET TREE DIVISION CREW
Pruning Operations
Type of Tree: "Chinese Elm" or ulmus pumila
Location: Arguello Blvd. at Golden Gate Avenue

STREET TREE DIVISION WATERING UNIT No. 663

Photograph shows a gardener cultivating and irrigating a tree on the west side of Masonic Avenue, between Turk Street and Anza Street. This unit is equipped with a pumping unit which permits the irrigating of trees and shrubs up to 125 feet off paved highways, in locations where an irrigation system has not been provided.

September 21, 1956

OPERATIONS

The activities of the Bureau of this Program were severely curtailed as a result of the drastic cut in the 1955-56 budget request for personnel and equipment. To properly maintain the 5,204 trees, 6 acres of shrubbery and 26 acres of ground cover, the Bureau requested 1 Foreman Gardener, 1 Sub-Foreman gardener, 1 Chauffeur and 18 gardeners, but the gardener request was cut to 12. In the equipment request, only 1 dump truck was allowed which had to serve as a means of transportation for personnel and for the hauling of supplies and cuttings.

The Bureau was extremely fortunate in receiving the gratuitous services of three prominent arborists who have formed a Street Tree Advisory Committee and at their monthly meetings have assisted in the development of a tree planting program. Mr. Roy L. Hudson of the Recreation-Park Department serves as a Chairman, ably assisted by the Messrs. Keith L. Davey, President of the Davey Tree Surgery Company and Harry E. Nelson in charge of the Horticulture Division of San Francisco City College The Committee has advised several groups of San Franciscans as to the proper trees to be planted in their respective neighborhoods and has also instigated a program of planting pilot trees in the various climatic zones of the City so that it can be determined which species of tree are best suited to these zones.

The Tree Planting Ordinance requires that a permit be obtained by all persons for the planting and maintenance of trees in sidewalk areas. The necessary forms made for this purpose include:

1. Rules and regulations as to the planting and maintenance of trees;
2. Application for permit;
3. Permit for planting and maintenance; and
4. Notice to remove tree, shrub or ground cover.

A small nursery has been established on the grounds of the Southeast Sewage Treatment Plant. In this area are developed the pilot trees obtained from the Saratoga Horticultural Foundation - a non-profit organization created to develop shade and ornamental trees.

BUREAU OF STREET REPAIR

F.D. Brown, Superintendent

FUNCTIONS

The major part of the activities of the Bureau of Street Repair concerns the routine maintenance and repair of the City's streets and appurtenant structures, the maintenance and operation of three lift bridges and the maintenance and operation of a tunnel. Minor work other than routine maintenance and repair is performed by order of the Director of Public Works. A considerable amount of paving is done for other departments.

Routine work includes the maintenance and repair of streets, gutters, curbs, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences; the maintenance of City dumps; the maintenance and operation of lift bridges and a tunnel.

Work ordered by the Director includes traffic channelization, the maintenance of planted areas in streets, and emergency work for the protection of the City and/or the public.

Work performed for other departments or bureaus includes the repair of pavement in Municipal Railway track areas, the repaving of trenches opened by the Bureau of Sewer Repair for the installation or repair of side sewers, the repair of state highways within the City, and the repair of pavements in school yards and the yards of other City institutions.

The City's charter provides that work on any one job shall not exceed a cost of $2,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalks in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

Activities are further limited by state law governing the expenditures of monies from which the bureau is financed.

Detailed descriptions of Curb Resetting and Replacing and Mudjacking will be found elsewhere in this report. Other detailed descriptions will be found in previous reports as follows:

Municipal Asphalt Plant	Report for Year Ending June 30, 1955
Machine Resurfacing	Report for Year Ending June 30, 1955
Bridges	Report for Year Ending June 30, 1954
Tunnel Lighting	Report for Year Ending June 30, 1954

Tunnel Cleaning	Report for Year Ending June 30, 1954
Source of Funds	Report for Year Ending June 30, 1953
Tunnel Ventilation	Report for Year Ending June 30, 1953

ORGANIZATION

There was little change in organization. The employments in the bureau, their grouping into crews and the division of supervision were as shown in the tabulation which is a part of this report.

An additional asphalt repair crew was to have been organized during the year. The hiring of a "fire truck" to transport crew, tools and tool heater met with opposition and it became necessary to request a supplemental appropriation to provide for its purchase. The necessary procedure, plus ninety day delivery, consumed the entire year.

The tabulation referred to above shows one Paver under Masonry Repair. "Paver's" work has become obsolete and the one incumbent had become a Jack-of-all-Trades when he retired August 1, 1955. Late in the year the Civil Service Commission determined that the position should be reclassified "Cement Finisher". A more suitable title must be found for the crew whose work consists of resetting manhole castings, sawing concrete, mud-jacking and a small amount of miscellaneous work.

During the year the Bureau lost the valued services of the following persons because of death or retirement:

Eugene Densmore	Retired
John Keane	Deceased
Matthew Moons	Retired
William Randall	Retired
Edward Scanlon	Deceased
William Tobin	Retired

SUPERVISION

All activities of the Bureau are under the general direction of the Superintendent.

The maintenance and operation of Bridges & Tunnel and the Asphalt Plant are adequately supervised by a Chief Operating Engineer and an Asphalt Plant Foreman, respectively.

Three General Foremen of Street Repair can not adequately supervise twenty-two mobile crews scattered throughout the City; too much time is consumed in investigating complaints, planning and assigning work, checking reports, travelling from job to job, etc.

As stated in the report for the year ending June 30, 1955, an assistant superintendent is a definite need and an additional general foreman could undoubtedly increase the amount of work performed appreciably.

EQUIPMENT

New equipment procured during the year included a tail gate loader, a sand blasting cart and a heater-planer.

The tail gate loader was mounted on the rear of the pickup truck used by the crew that does the mud-jacking, concrete sawing and casting resetting. The truck battery powers a pump which, in turn, powers an hydraulic lift. This loader permits carrying the mud-jack and concrete saw in the truck body instead of trailing them. It also facilitates the loading and handling of heavy castings and materials.

The sandblasting cart is a small, inexpensive unit. It is designed to remove traffic stripes but can also be used for general sandblasting. It provides the best method yet found for the removal of stripes painted on concrete pavement. It requires approximately 100 c.f.m. or air compressed to 100 p.s.i.

In response to requests for proposals, bids were received on three makes of heater-planers. None is sufficiently versatile to be completely efficient on the three types of work contemplated: general heater-planing, "key cutting"to provide conform shoulders, and "hogging" to provide gutter depth or to lower crown. After exhaustive study it was concluded that the Littleford-Clarkmoore unit would best suit our needs. This machine is highly maneuverable for its size (28'5" long with 20'0" wheelbase), having a 31'0" turning radius, hydraulic steering, hydraulic brakes on all four wheels and travel speed up to 20 m.p.h. Heat from its single, low pressure burner is confined under an 82" x 108" hood. Two planing blades are so arranged that material planed from the 82" width is left in a single windrow between the wheels. Planing speeds range from eight inches to forty feet per minute. Planing and overall widths being the same, 82", this machine can plane against curbs, poles or even buildings. Delivery came so late that it was operated only four days before the close of the fiscal year. A detailed account of its operation will appear in the next annual report.

MUNICIPAL ASPHALT PLANT

The new Municipal Asphalt Plant functioned very nicely throughout the year with the following exceptions.

On September 2, 1955 the blower which supplies air to the drier failed apparently because of improper assembly. The construction contractor assumed the responsibility, repairs were made and the plant resumed operation on September 14, 1955.

On February 17, 1956, the speed reduction unit on the head shaft of the cold elevator failed apparently because of improper type or inadequate design. The City proceeded to make repair and the plant resumed operation on February 23, 1956. The construction contractor assumed responsibility to the extent of furnishing a new unit.

On March 22, 1956, the asphalt injector pump (line to weigh bucket) failed for no apparent reason. The City proceeded to make repairs and the plant resumed operation on March 23, 1956.

ASPHALT PRODUCTION

The bureau produced 49,946 tons of asphaltic mixtures during the year. This was considerably more than for prior years (39,492 tons in 1954-1955, 37,815 in 1953-1954 and 37,039 in 1952-1953) and only 54 tons less than the goal of 50,000.

Mixtures produced, and their composition, were as follows:

MIXTURES PRODUCED		COMPOSITION - %				
Mix Designation	Tons	Asphalt	#6	5/16"	5/8"	1¼"
Surface	3,943	8½	91½			
School	4,050	7	60	33		
Topeka	10,059	6	45	25	24	
Spreader	30,883	5½	40	25	17½	12
Binder	984	3½	21	28	22½	25
Cold Mixtures	27					
TOTAL PRODUCED	49,946					

Aggregates were screened into the four "hot" bins from a combination of Antioch sand, coarse graded sand and three sizes of washed gravel. Asphalt used was 50-60 penetration, paving grade.

WORK PERFORMED

Work performed on Major and Secondary streets during 1955-1956 included the following major and more interesting functions:

	Unit	Quantity	Total Cost	Unit Cost
Asphalt Resurfacing, Hand				
Asphalt Paving	Sq. Ft.	207,220	$ 24,011	$ .116
	Ton	1,667		14.40
Reset Castings	Each	7	406	58.00
Total	Sq. Ft.	207,220	$ 24,417	.118
(124.3 sq. ft. per ton)	Ton	1,667		14.65
Asphalt Resurfacing Machine				
Asphalt Paving	Sq. Ft.	5,249,316	$252,414	$ .048
	Ton	35,859		7.04
Reset Castings	Each	508	21,807	42.93
Total	Sq. Ft.	5,249,316	$274,221	.052
(146.4 sq. ft. per ton)	Ton	35,859		$ 7.65
Asphalt Patching				
Compressor Work	Sq. Ft.	218,524	$ 18,716	$ .086
Asphalt Paving	Sq. Ft.	1,027,353	206,623	.201
	Ton	7,810		26.46
Cleanup			38,810	
Total	Sq. Ft.	1,027,353	$264,149	.257
	Ton	7,810		$33.82
Curb Reset and Replaced				
Compressor Work	Lin. Ft.	26,748	$ 19,968	$ .747
Granite, Reset	Lin. Ft.	12,502	10,844	.867
Replaced	Lin. Ft.	2,058	3,814	1.853
Concrete, Reset	Lin. Ft.	10,371	8,613	.830
Replaced	Lin. Ft.	986	3,220	3.266
Pavement, Asphalt	Sq. Ft.	18,994	11,445	.603
Concrete	Sq. Ft.	950	1,403	1.477
Sidewalk	Sq. Ft.	30,057	33,194	1.104
Cleanup	Lin. Ft.	25,917	35,954	1.387
Total	Lin. Ft.	25,917	$128,455	$ 4.956
Concrete Curb Repair			$ 10,782	
Curb Yard				
Redress Granite Curb	Lin. Ft.	5,963	$ 10,828	$ 1.82
Sort, move, etc.			5,282	
Total			$ 16,110	

	Unit	Quantity	Total Cost	Unit Cost
Crack Sealing				
Sealing	Lin. Ft.	1,825,368	$ 91,257	$ 0.050
Cut and Fill	Lin. Ft.	31,854	7,291	.229
Cleanup			23,001	
Total		1,857,222	$121,549	$ 0.065
Surface Sealing	Sq. Ft.	65,018	$ 8,388	$ 0.129
Manhole Castings Reset	Each	119	$ 7,515	$63.15
Concrete Pavement Repaired	Sq. Ft.	3,670	$ 6,832	$ 1.86
Sidewalk Reconstructed	Sq. Ft.	14,154	$ 19,223	$ 1.36
Traffic Stripes Removed				
Burn	Lin. Ft.	27,243	$ 4,176	$ 0.153
Sandblast	Lin. Ft.	1,100	495	.450
Total	Lin. Ft.	28,343	$ 4,671	$ 0.165
Mud-Jacking			$ 11,695	
Slide and Debris Cleanup			$ 43,831	

Work on State Highways accounted for an expenditure of $ 12,975, the major portion of which was for the repair of 38,889 square feet of asphaltic pavement. Other work was composed of 13,045 linear feet of crack sealing, 1,050 linear feet of traffic stripe removal, resetting of three catchbasins and minor curb and concrete pavement repair.

Work for other Bureaus and Departments accounted for an expenditure of $ 148,362, the major portion of which was for 52,986 square feet of asphaltic pavement, the surfacing and repair of 207,148 square feet of asphaltic pavement and the repair of 7,501 square feet of concrete pavement. Other work included the construction of traffic channels, the hauling of records for the Controller, the furnishing of labor for various purposes and the furnishing of several other varied services.

CURB RESETTING AND REPLACING

The resetting or replacing of a short length of curb appears to be a simple operation. It may be surprising to learn that it involves the services of more than twenty men working in five crews performing five separate operations.

A compressor crew, composed of a chauffeur and two pneumatic tool operators equipped with pavement breakers and a 105 or 125 c.f.m. compressor, is dispatched to break out the adjacent pavement. The sidewalk, if any, is usually broken to the nearest flag marking; the street pavement for a width of approximately eight inches. It is sometimes necessary for this crew to stand by or return to cut a stone to exact length.

A cleanup crew, composed of a chauffeur, four laborers and a foreman, then removes the broken pavement and excavates to the bottom of the curb. Broken pavement and excess excavated material are removed in a four cubic yard dump truck. The latter is equipped with a workmen's compartment to carry the crew. It is usually necessary for this crew to return to the site to make final cleanup. This crew also removes old and delivers new granite curb as necessary.

The actual curb work is divided into four classes; Reset Granite Curb, Reset Concrete Curb, Replace Granite Curb and Replace Concrete Curb.

The first three are similar, except that replacement involves removal of old curb and delivery of new, and are performed by a crew composed of a curbsetter and two laborers. A pickup truck is furnished to transport crew and tools. The work is usually done by hand but on larger jobs, where scattered stones are to be replaced, the usable stones are set consecutively by use of a two ton tractor mounted crane and the replacements "gathered" into one continuous run. When the curb has been barred into place a sufficient amount of backfill is compacted so thoroughly that there is little chance of movement before the pavement is restored. Sand is often imported for the latter purpose.

Concrete curb is replaced by a concrete repair crew composed of two or three cement finishers. A pickup truck is furnished to transport crew, tools and materials. A materials delivery truck which serves several crews is available when the quantity of materials exceeds that which can be carried in the pickup. Forming, placing concrete, stripping and finishing are done in the usual manner.

The curb having been reset or replaced, the pavement and sidewalk must be restored. There are a few districts that have planting areas between curb and sidewalk, in which case no sidewalk work is necessary. In rare instances the sidewalk may be of an asphaltic mixture.

Concrete sidewalk restoration is made by a concrete repair crew similar to that described above.

Pavement is restored by a concrete repair crew or asphalt repair crew, depending upon the type of pavement; asphaltic pavement predominates. Asphalt on concrete pavement is replaced entirely with asphaltic mixtures.

Concrete pavement is restored by a concrete repair crew similar to that previously described.

Asphaltic pavement is restored by an asphalt repair crew. This crew may vary slightly but is usually composed of a chauffeur, two asphalt workers, a potman, two asphalt finishers and a foreman. A four cubic yard dump truck is furnished to transport materials. A one and one half ton flat bed truck is hired, with driver, to transport asphalt kettle and tool heater, tools and crew.

MUD-JACKING

Mud-jacking is the filling of voids under pavements and the raising of sunken pavement slabs by the use of mud under pressure.

The mud-jack presently being used is a Koehring Model 10 which is only slightly larger than a common concrete buggy. It is composed of a mud tray, displacement pump, discharge line and gasoline engine, all mounted on pneumatic tired wheels. The 1 1/4 HP, single cylinder engine is air cooled. The discharge line is so placed that the weight of the machine holds its 2 1/2' diameter rubber tip in place during jacking operations. The pump has a displacement of 47 c.f.m. at a maximum pressure of 100 p.s.i.

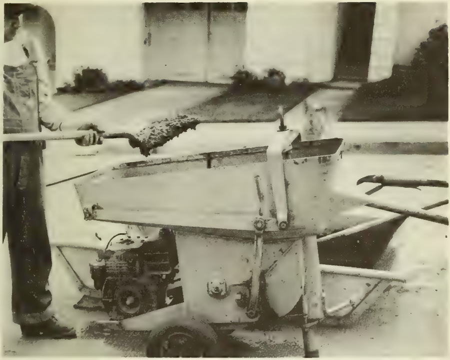
"Mud" is composed of loam and a little portland cement mixed with water. Clayey loam has been found to be more satisfactory than sandy loam; sand will not work. The consistency can be varied slightly, depending upon material and void to be filled, but must be kept within the slurry range. The use of emulsified asphalt has been given thought but has not yet been tried.

The area to be mud-jacked is first patterned with 2 1/2" diameter holes drilled through the pavement. These holes can be drilled well in advance of jacking operations but should be temporarily plugged if they might endanger pedestrians. It is sometimes necessary to have additional holes drilled during jacking operations.

Before jacking is commenced, large voids are filled by flushing sand into them through holes, about one foot square, cut in the pavement.

When the machine is set up, with discharge line inserted, mud is mixed, put into the mud tray and fed to the pump. When mud appears in adjacent holes they are plugged or the machine moved. Care must be taken that too great a pressure at any one point does not cause the slab to break.

This function has so far been performed on a part time basis. A permanent crew has not yet been organized, nor is one contemplated.



MUD JACKING

SEALING CRACKS

On small, localized jobs the work has been done by a crew composed of a foreman and two laborers. A pickup truck equipped with a tailgate loader is furnished to transport crew, materials and the mud-jack.

On larger jobs a Crack Sealing crew, composed of a Chauffeur, four laborers and a foreman, has been used. A four cubic yard dump truck equipped with workmen's compartment, materials, and a 75 c.f.m. compressor is furnished to transport crew.

Regardless of which crew is used for actual mud-jacking, holes are drilled by a compressor crew composed of a chauffeur and two pneumatic tool operators equipped with pneumatic drill and a 105 or 125 c.f.m. truck mounted compressor.

When the three man crew is operating it is sometimes necessary to have the compressor crew stand by or return to drill additional holes. The larger crew is equipped to drill the few additional holes that might be needed.

BRIDGES

The manner of operating the City's three lift bridges was not changed during the year.

Routine maintenance and repair was arranged by this bureau; major work was arranged by the Bureau of Engineering:

Bridge openings for the past three years were as follows:

	1953-1954	1954-1955	1955-1956
Third & Channel	796	950	800
Third & Islais	1504	1318	1338
Fourth & Channel	306	372	290

TUNNEL

The Broadway Tunnel continued to be maintained and operated in virtually the same manner as in previous years. The only change made was the substitution of a watchman for an operating engineer on three night watches. All night watches are now manned by watchmen and all day watches by operating engineers.

Operation of the ventilating system continued to be as described in the report for the year ending June 30, 1954. The operating time of the blowers, with 1954-1955 operating time shown in parenthesis, was as follows:

	Slow Speed			Fast Speed		
	Hours		Percent	Hours		Percent
No. 1, North Bore Westbound Traffic	(196.9)	293.1	3.34	(6.5)	6.4	.07
No. 2, North Bore Westbound Traffic	(189.9)	291.6	3.32	(8.3)	3.3	.04
Total	(386.8)	584.7	6.66	(14.8)	9.7	.11
No. 3, South Bore Eastbound Traffic	(18.6)	16.1	.18	(1.6)	11.0	.12
No. 4, South Bore Eastbound Traffic	(18.2)	15.5	.18	(1.3)	9.3	.11
Total	(36.8)	31.6	.36	(2.9)	20.3	.23

NOTE: Blowers No. 3 and No. 4 bypassed "low speed" for an unknown period of time. Other differences were due to wind and traffic conditions.

The lighting system continued to function trouble free. A total of 871 burned out lamps were replaced during the year. Lamp replacements were made on seven occasions, or at intervals of slightly less than two months.

Cleaning was done in the usual manner by the Bureau of Street Cleaning.

It was noted in the last previous report that the planted areas at the ventilation buildings were larger than could be properly maintained by the operating personnel. During the year the area at the westerly ventilation building was improved by the paving of a large portion and by the installation of benches and a protective wall. The work was performed by contract under the supervision of the Bureau of Engineering.

No traffic count was made during the year. Previous counts were as follows:

	Eastbound	Westbound
Wednesday, February 11, 1953	8,668	8,760
Monday, August 17, 1953	9,361	8,878
Wednesday, March 16, 1955	10,607	9,795

BUREAU OF STREET REPAIR Personnel and Equipment; Composition of Crews 1956 - 1957 CREW	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIRS	ASPHALT REPAIRS	ASPHALT REPAIRS	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	MASONRY REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP	CLEANUP	MATERIAL DELIVERY	SEALING	SEALING	SEALING	TRACTOR WORK	YARDS	MISCL. ASSIGNMENTS	PART TIME - STANDBY	UNFILLED POSITIONS	ASPHALT PLANT	BRIDGES	TUNNEL	TOTALS
PERMANENT EMPLOYMENTS																																
Supt. of Street Repair																																1
Gen. Fore. of Street Repair																																3
Watchmen																									1					5	3	9
Operating Engineer																														13	2	15
PER DIEM EMPLOYMENTS																																
Cement Fin. Helper												1																				1
Cement Finisher												2	3	2																		7
Laborer								4	4	1	1					2		4	4		2	2	2		2	2			1			31
Pneumatic Tool Opr.						2	2										2				1	1	1									9
Sprayman																					1	1	1									3
Labor Foreman																		1														1
Labor Sub-Foreman									1										1													2
Chauffeur	5	2	1	1	1	1	1	1	1	2							1	1	1	1	1	1	1	1		1						25
Engineer, H & P Engines	3	1																														4
Dryer - Mixerman																													3			3
Foreman - Asphalt Plt.																													1			1
*Paver											1																					1
Granite Cutter															2													1				3
Curbsetter																1																1
Asphalt Worker	4	2	3	3	2																								2			16
Potman	1	1	1	1	1																							1				6
Asphalt Finisher	4	3	2	2	2																							1	1			15
Sub-foreman Finisher	1	1	1	1	1			1													1	1	1									9
Foreman	1																															1

The Machine Resurfacing Crew was used for making major street repairs during a considerable part of the year. During such time two engineers were released to work with other crews. The standby truck mounted compressor was put into service and the crew performed its own compressor work and cleanup.

During the time that the Machine Resurfacing Crew worked as a repair crew two engineers were assigned to Street Repair Crews thus providing two of them with power rolling where Hand Rolling would otherwise be used.

"TOTALS" show the number of employments provided by the annual salary ordinance.

Clerical service was provided by the Bureau of Accounts. The part time services of a Chief Engineer and a relief Watchman were furnished by the Bureau of Building Repair. The Bureaus rendering the service were appropriately reimbursed.

BUREAU OF STREET REPAIR continued	CREW	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIRS	ASPHALT REPAIRS	ASPHALT REPAIRS	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	MASONRY REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP	CLEANUP	MATERIAL DELIVERY	SEALING	SEALING	SEALING	TRACTOR WORK	YARDS	MISCL. ASSIGNMENTS	PART TIME - STANDBY	UNFILLED POSITIONS	ASPHALT PLANT	BRIDGES	TUNNEL	TOTALS
EQUIPMENT																																	
Passenger Cars																																	6
Dump Trucks		5	2	1	1	1					2										1							1		1			15
Dump Trucks, Wkm's. Comp.									1	1									1	1													4
Trucks - Sealing Units																						1	1	1				1					4
Truck - Low Bed																												1					1
Truck Mounted Compressor								1	1									1										1					4
Trailer Mounted Compressor																												1					1
Skid Mounted Compressor																												1					1
Paving Machine		1																															1
Power Rollers		2	1																									1					4
Tractor-Loader											1																						1
Tractor and Bulldozer																									1								1
Pickup Trucks		1										1	1	1	1		1																6
Spray Machine		1																				1	1	1				2					6
Power Grader																												1					1
Tractor Crane																												1					1
Sand Loader																												1					1
Tractor Surface Htr.																												1					1
Concrete Saw												1																					1
Tip Trailer																											1						1
Asphalt Kettles and Tool Heaters			1	1	1	1																						2					6
Mud Jack																												1					1
Heater-Planer																												1					1
HIRED EQUIPMENT																																	
Trucks		1	1	1	1	1															1							1					7

Resurfacing crews, asphalt repair crews, two compressor crews, a utility crew, a power loaded cleanup crew, tractor crew and one hand loaded cleanup crew were under the general supervision of General Foreman, J.P. Barry.

The Masonry repair crew, concrete repair crews, curb dressing crew, curb resetting crew, one compressor crew, two cleanup crews and a materials delivery truck were under the general supervision of General Foreman, Thomas Breslin.

The sealing crews were under the general supervision of General Foreman, W.S. Balk who also had other duties.

The bridges and tunnel were under the general supervision of Chief Operating Engineer, John Donaldson.

The asphalt plant was operated under the supervision of Asphalt Plant Foreman, C.J. McFadden.

* Paver retired 10/1/55, replaced with Bricklayer. Bricklayer replaced with Labor Sub-Foreman 5/1/56.

HEATER - PLANING

ADMINISTRATIVE BUREAUS

R. Brooks Larter

Assistant Director, Administrative

The primary duty of the administrative bureaus is to provide the necessary administrative services to the operating bureaus such as processing of personnel, preparation of operating reports, preparation of requests for funds, preparation of timerolls and payrolls, processing of purchase orders.

During the fiscal year ending June 30, 1956, a detailed study was made of the accounting and records-keeping function at Army Street with the result that a machine accounting system has been recommended and the necessary equipment placed on order for delivery January 1, 1957.

Consolidation of the telephone switchboard at the Army Street yard with the City Hall switchboard is contemplated and will take effect in July 1956. This consolidation is based on studies of telephone traffic which reveal that most of the traffic of the Army Street switchboard is with telephones connected to the City Hall board. Since it is necessary to employ two telephone operators to man the Army Street board, it is anticipated that definite economies will reresult from this change.

BUREAU OF ACCOUNTS

J.J. McCloskey, Chief Clerk

The Bureau of Accounts continued its principal activity, the operation and control of the budgetary and financial transactions of the Department of Public Works, at about the same level of performance as during the previous fiscal year. Processing of all documents dealing with the disbursement of funds is the responsibility of the Bureau, including their channelization through all required procedures until finally liquidated.

The Bureau has a central office at the City Hall, to which there are assigned the following employees: 1 Accountant II, 1 Accountant I, 1 Account Clerk, 2 General Clerks and 1 General Clerk-Stenographer. These employees handle the accounts for construction work being performed by the Department and also the operating accounts for the General Office, Bureau of Engineering, Bureau of Architecture, Bureau of Building Inspection and Central Permit Bureau.

The Bureau has a larger office at the Department of Public Works Maintenance Yard, 2323 Army Street, at which the greater number of employees are located. This yard office handles the operating accounts for the following Maintenance and Repair Bureaus: Bureau of Building Repair, Bureau of Sewer Repair, Sewage Treatment Plants, Sewage Pumping Stations, Bureau of Street Cleaning, Bureau of Street Repair, Bridges and Channels and the Street Tree Planting Division.

PERSONNEL

The permanent staff of 37 employees consists of:

1 - Chief Clerk in charge of the Bureau
2 - Head Clerks
6 - Accountants I
2 - Accountants II
2 - Senior Clerks
1 - Account Clerk
13 - General Clerks
5 - General Clerk-Stenographers
3 - General Clerk-Typists
2 - Telephone Operators

In addition to the above employees, a Storekeeper is assigned by the Purchaser of Supplies to perform duties in connection with the operation of the sub-storeroom and materials yard.

During the year, three permanent positions were re-classified by the Civil Service Commission:

(a) One position of Senior Clerk was re-classified to Accountant II for the purpose of maintaining and supervising the accounts, payrolls, and assisting in the preparation of the budget for the City Hall Bureaus of the Department.

(b) One position of General Clerk-Stenographer was re-classified to Account Clerk to assist in the keeping of cost accounts in connection with Bond Funds construction work being performed by the Bureau of Architecture.

(c) One position of Accountant I was re-classified to Accountant II at the Maintenance Yard office for the purpose of supervising the Work Order job costs and assisting in the preparation of the annual budgets for the operating and maintenance bureaus.

On April 1, 1956, the Bureau lost the services of one of its most valued employees, through the retirement of Charles J. Clark, Senior Clerk, in charge of the yard personnel and payroll section. His departure was accompanied by the good wishes of many hundreds of his friends in the various yard bureaus, and with the sincere appreciation of the Department's administrative staff for the model system of payroll and personnel procedures established through his efforts during his 30 years of exemplary service in the Bureau.

Budget expenditures for operation of the Bureau of Accounts for fiscal year 1955-56 were as follows:

Permanent Salaries	$ 111,986.58
Temporary Salaries	173.33
Contractural Services	770.95
Materials and Supplies	719.44
Services of other departments	4,103.00
Equipment	406.65
TOTAL	$ 118,159.95

FUNCTIONS AND ORGANIZATION

The operating functions of the Bureau embrace control of payroll procedure, personnel records and field time-keeping; purchase order requisitions; sub-storeroom and inventories; automotive expenditures and gasoline and tire records; work order job costs and invoicing; side sewer job and refunds accounts; State gas tax subventions and Bond Funds accounts; the cash revolving fund for the Department; the stores revolving fund; budget preparation and controlling accounts; operation of the Yard telephone exchange; Radio Control Station; and the supplying of clerical service to all of the operating bureaus.

Included in the general functions of the Bureau are three well defined sub-divisions: Payrolls and Personnel; Purchasing and Stores including inventories; Gas Tax subventions, Bond Funds and Budgetary and Cost accounting and reports.

Three field timekeepers check outside operations for payroll verification and also act as paymasters on semi-monthly pay days, delivering pay warrants to employees on the job.

One General Clerk is assigned to act in the capacity of Control Station Operator of the Department's mobile radio system which began operation on March 1, 1954. The radio system includes 24 mobile radios in passenger vehicles and trucks of the Department in addition to the Control Station. During the fiscal year 1955-56, a total of 8,317 calls was handled for an average of 33 calls per day. In addition to the radio activities, this clerk handled routine clerical duties for the Bureau of Street Cleaning, including the Street Tree Planting Division.

OPERATIONS

Reports to the Director on operations of the Building Repair, Sewer Repair, Street Repair and Street Cleaning Bureaus are prepared monthly by the Bureau of Accounts from the records maintained in the Bureau.

Job costs pertaining to damages to City property under the jurisdiction of the Department are compiled and forwarded to responsible parties for collection. These costs amounted to $12,614.87 for the fiscal year and embraced 237 cases, covering damages to bridges, automotive equipment, street structures, traffic signals, street signs, street trees, traffic devices and prisoner damage to police stations. The Bureau handled the fiscal processing of contracts under bond issues for Street Improvements, Sewers, Sewage Treatment Plants, Schools, Hospitals, and Fire Houses under programs which are expected to continue into subsequent years.

In the supplying of materials for the varied activities of the Department, a sub-storeroom and a material yard are conducted, through which 27,113 transactions were handled involving the delivery of 81,300 items to jobs. Outside purchases from vendors brought about the issuance of 6,251 requisitions involving 16,785 items and 6,186 delivery orders involving 18,558 items and 15,819 storeroom tags involving the delivery of 47,457 items and 123 requisitions on storekeeper involving 1,845 items.

The Stores Revolving Fund under the control of the Bureau is designed to permit the purchase in advance of constantly used materials. Plumbing supplies, electrical items, paints, hardware, lumber, glass, tools, sewer pipe, brick, cement, castings and miscellaneous needs which can be foreseen, are carried in Stores and charged out to the various jobs as needed. Controls have been established which facilitate monthly reimbursements for goods withdrawn, and stores records are maintained on a perpetual inventory basis subject to annual physical check.

The Department Cash Revolving Fund of $1,500.00 is used by the Bureau for payment of small bills and transportation charges, and enables workmen on field work to make cash purchases at neighborhood stores thus avoiding trips to downtown establishments. During the fiscal year, 39 monthly Revolving Fund vouchers were prepared, requiring the issuance of 1,577 warrants for a total of $ 14,284.15. All transactions are conducted under controls set up by Ordinance of the Board of Supervisors.

Detailed records of all expenditures are maintained, particularly on jobs performed under job estimates and work order procedures. In these, the Charter requires that all elements of indirect and supervisory costs be considered and made part of the final job cost. To accomplish this, indirect labor is pro-rated monthly on an exact percentage basis, as are overhead charges for accident compensation, sick leave, vacation, retirement, equipment replacement and miscellaneous. These items of overhead are accumulated in reserves to meet the requirements designated. Charges for small tools and shop supplies used in work order operations are made against the miscellaneous reserve.

BUREAU OF ACCOUNTS

Interdepartmental Service, under work order procedure for:

Schools	$ 909,261.23
Health	3,028.94
Recreation - Park	35,749.65
Library	1,043.26
Public Buildings Improvements	268,950.77
Gas Tax Accounts	1,259,999.94
Engineering	6,181.77
Public Utilities	31,895.73
General Fund	93,366.37
Fire Department	2,109.51
Special Inspection	10,101.58
State Highway Cleaning	45,991.59
Paving Side Sewers	38,791.66
State Highway Repairs	20,027.46
State Highway Projects	2,458.38
Legion of Honor	23,806.45
Publicity and Advertising	2,869.41
War Memorial	11,579.14
M. H. De Young Museum	1,659.60
Sewage Treatment Plant Bonds	57,068.81
Sewer Bonds	277,435.98
Street Bonds	151,007.97
S. F. Hospital Bonds	110,884.83
Exhibit Hall Bonds	7,284.75
Juvenile Court Bonds	1,114.02
School Bonds	105,263.68
Fire House Bonds	86,143.83
Laguna Honda Home Bonds	145,239.61
Miscellaneous	51,939.80
TOTAL INTERDEPARTMENTAL SERVICE	$ 3,762,255.72

SUMMARY OF TRANSACTIONS

Budgeted Funds, Subject to Control and Appropriated To:

	BUDGET		EXPENDITURE	
BUREAU	1954-1955	1955-1956	1954-1955	1955-1956
GENERAL FUND:				
General Office	$ 123,406	$ 125,184	$ 122,663	$ 123,387
General Office - Improvements	915,247	565,610	577,852	353,969*
Architecture	41,791	451,442	57,267	431,560
Building Inspection	355,953	392,761	351,992	381,465
Engineering	396,891	438,396	399,303	412,747
Centeral Permit	44,634	43,985	39,627	42,993
Accounts	110,962	122,530	106,353	118,160
Building Repair	1,642,272	2,255,651	1,584,247	2,228,570
Traffic Striping	187,758	186,433	185,962	176,518
Street Cleaning	1,701,479	1,774,785	1,635,016	1,746,046
Sewer Repair	816,561	882,082	809,796	868,362ø
Sewage Treatment Plants	825,629	884,855	819,180	864,304
Sewage Pumping Stations	81,439	94,329	81,268	91,956
SPECIAL ROAD IMPROVEMENT FUND:				
Street Repair	1,265,597	1,288,425	1,193,170	1,264,409
Bridges and Tunnels	161,463	152,800	149,765	151,046
Traffic Engineering	264,978	334,678	233,294	309,734
Traffic Signal Maintenance	159,723	174,857	159,215	171,509
Engineering Administrative	45,943	44,225	41,139	43,535
Maintenance and Reconstruction	655,113	327,000	653,993	171,654
Construction	1,180,000	1,590,000	708,991	385,826+
Street Tree Planting	-	80,527	-	78,756
SPECIAL GAS TAX STREET IMPROVEMENT:				
Maintenance	149,500	375,600	143,047	307,105
Construction	1,882,000	4,411,000	645,456	1,257,892#
TOTALS	$13,008,339	$16,997,155	$10,698,596	$11,981,503

* Includes the sum of $314,945.48 for Capital Improvements budgeted in prior year.

ø Includes the sum of $133,252.45 expended against side sewer deposits for installation and repair covering 582 permit deposits for 605 house connections.

+ Includes the sum of $269,897.41 for Construction budgeted in prior years.

# Includes the sum of $1,252,627.93 for Construction budgeted in prior years.

CENTRAL PERMIT BUREAU

Sidney Franklin, Supervisor

FUNCTIONS

The Central Permit Bureau is the clerical arm of the Department of Public Works in respect to the issuance of the various types of permits under the jurisdiction of this department. It is the function of this bureau to receive, record and process applications for these permits in accordance with the proper laws and ordinances, to issue the necessary permits and to collect the required fees.

During the fiscal year 1955 - 1956 the Central Permit Bureau issued 51,864 permits, an increase of more than 12% over the previous fiscal year. The applications for each of these permits must be promptly and accurately recorded and transmitted to from two to five agencies for approval before issuance. This increase of work load was handled with no increase in personnel.

The Central Permit Bureau is the custodian of all public records pertaining to permits issued by the Department of Public Works, and of all plans and specifications filed in conjunction with these permits.

Another function of this bureau is the issuing of house numbers. All new buildings receive house numbers when the building permits are issued and houses are renumbered wherever necessary. Accurate official records are kept of all the house numbers in the City, which are constantly referred to when official house number information is needed.

It is also the duty of the Central Permit Bureau to render bills for all claims for damages to property under the jurisdiction of the Department of Public Works, and for costs in excess of deposits in the installation of side sewers. The monies collected from these bills, as well as all other receipts of the department, are cleared through this bureau for deposit in the proper funds in the City Treasury.

PERSONNEL

The personnel of the Central Permit Bureau, as of June 30th, 1956, was as follows:

1	Supervisor
1	Cashier
2	Senior Clerks
1	General Clerk-Stenographer
5	General Clerk-Typists

Central Permit Bureau

TABLE I

PERMITS ISSUED AND FEES RECEIVED

	1955-1956		1954-1955	
	Permits	Fees	Permits	Fees
Buildings	9,227	$ 220,381	8,771	$ 213,258
Billboards	218	691	190	726
Demolitions	305	2,695	172	1,395
Boiler Installations	88	548	133	680
Boiler Inspections	1,473	6,270	1,065	5,176
Street Space*	1,004	35,978	953	32,549
House Numbers	867	3,237	918	3,480
House Moving	51	1,020	6	120
Excavations (Pub.Util., etc.)	9,094	17,511	9,764	17,078
Excavations (Excl. of Util.)*	829	2,931	874	3,025
Flue Registrations	35	700	29	580
Flues - New Buildings	46	23	36	18
Flues - Old Buildings	70	140	87	174
Flues - New Bldgs., Coupons	44	550	60	750
Flues - Old Bldgs., Coupons	7	140	23	460
Posting Notices	707	1,988	839	2,198
Flower Markets	54	1,440	44	1,500
Advertising	14	2,485	16	2,182
Surveys	28	15,820	30	9,210
Engineering Inspections	53	13,635	59	19,530
Electrical Inspections	23,021	97,340	17,567	91,943
Sign Inspections	Inc. in Elec. Insp.	7,570	Inc. in Elec. Insp.	8,396
Electrical Sales	2,100	21,999	2,120	21,200
Sidewalks	12	-	10	-
Plan Checking **	239	5,166	-	-
Architect's Investigation **	2	200	-	-
TOTAL - TABLE I	49,588	$ 460,638	43,766	$ 436,145
TOTAL - TABLES II - III	2,276	4,782,145	2,503	5,442,202
GRAND TOTAL - PERMITS & REVENUE	51,864	$5,242,783	46,269	$5,878,347

* Permits and fees only.
See Table II for refundable deposits

** New fees inaugurated May 7th, 1956

TABLE II

MISCELLANEOUS DEPOSITS

	1955 - 1956		1954 - 1955	
	Permits	Deposits	Permits	Deposits
REFUNDABLE DEPOSITS				
Street Space	*	$ 21,120	*	$ 21,600
Subsidewalk	-	-	1	3,300
Deposit on Plans	1,428	49,937	1,597	55,155
Excavations	*	1,044	*	2,167
TOTAL	1,428	$ 72,101	1,598	$ 82,222

* Street Space and Excavations require both a fee and a deposit. Amounts shown are deposits only.

PARTIALLY REFUNDABLE DEPOSITS				
Side Sewers	610	$182,514	649	$ 172,680
Excess Costs - Side Sewers	143	7,594	162	6,158
TOTAL RECEIVED	753	$190,108	811	$ 178,838
AMOUNT REFUNDED **		$ 45,592		$ 36,817
Net Revenue applied or to be applied to Installation Costs		$144,516		$ 142,021

** Includes Total and Partial Refunds

AGENCY DEPOSITS				
Street Improvement Bonds	95	$ 9,667	94	$ 8,309
TOTALS	2,276	$271,876	2,503	$ 269,369

TABLE III

MISCELLANEOUS REVENUE

	1955-1956 REVENUE	1954-1955 REVENUE
General Fund	$ 49,071	$ 66,604
Special Road Improvement Fund	2,889,498	2,566,760
State Highway Trust Fund	60,688	387,450
1948 School Bond Fund	536	4,660
Special Gas Tax - Street Improvement Fund	1,509,670	2,147,036
Library Fund	-	87
1952 Fire House Fund	-	236
San Francisco Unified School District Fund	806	-
TOTALS	$4,510,269	$5,172,833

TABLE IV

STATEMENT OF CONDITION

SPECIAL FUNDS AS OF JUNE 30, 1956

	Balance June 30, 1955	Deposits 1955-1956	Refunds 1955-1956	Balance June 30, 1956
Special Permit Fund (St. Space and Subsidewalk Dep.)	21,829	21,120	22,200	20,749
Street Improvement Fund (Payments of Street Imp. Bonds)	465.27	-	-	465.27
Excavation Fund	3,733.30	1,044.50	1,295.30	3,482.50
Deposits on Plans	6,295	49,937	46,943	9,289

APPENDIX I

BUREAU OF ENGINEERING - CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Way
July 1, 1955 - June 30, 1956

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1955-1956
A	Major Thoroughfares	3	$ 415,062.72	$ 734,112.77
B-1	Streets - Private Contracts	19	180,537.00	373,655.00
B-2	Streets - Assessment Proceedings	18	162,523.30	232,032.34
B-3	Streets - Public Contract City Pay	7	359,393.47	476,520.99
B-4	Streets - Car Track Removal	3	369,221.09	664,252.86
C	Traffic Signals & Channelization	7	289,185.83	260,583.74
D-1	Sewers - Pipe Vitrified Clay & Concrete	6	563,067.88	304,543.80
D-2	Sewers - Concrete Monolithic	3	274,503.60	648,974.51
E	Miscellaneous	36	955,698.51	416,887.31
	TOTALS	102	$3,569,193.40	$4,111,563.32

TABLES

On the following pages appear separate tables of current contracts for each of the types of Construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
Spec. Rd.	Special Road Improvement Fund
Major Sts.	Special Gas Tax Improvement Fund
State Hwy.	State Highway Fund
Assmt.	Assessed to property benefiting under the Street Improvement Ordinance of 1934
Pd. Prop. Owners	Costs borne by Property Owners under private contract
1944 Sewer Bond	Bond Issue voted by citizens on November 7, 1944 - $12,000,000
1947 St. Imp. Bond	Bond Issue voted by citizens on November 4, 1947 - $22,850,000
1948 Sewage Tr. Bond	Bond Issue voted by citizens on June 1, 1948 - $15,000,000
1954 Sewer Bond	Bond Issue voted by citizens on June 8, 1954 - $12,645,000
1947 Off Street Parking Bond	Bond Issue voted by citizens on November 4, 1947 - $5,000,000
1954 Laguna Honda Bond	Bond Issue voted by citizens on November 2, 1954 - $5,475,000

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A - MAJOR THOROUGHFARES					
Lake Merced Blvd. at Font Blvd. & Winston Drive (Channelization) Chas. L. Harney, Inc.	9-15-54	6-9-55	$ 47,756.88	$ 13,756.88	Spec.Rd. Major Sts.
Portola Drive - From Woodside Ave. to Clipper St. (Improvement) Chas. L. Harney Inc.	3-2-55	9-28-55	127,080.76	95,120.76	Spec.Rd. 1944 Sewer Bd.
Skyline Blvd. from Lake Merced to County Line (Widening) Chas. L. Harney Inc.	6-10-55	3-16-56	358,607.91	358,607.91	State Hwy.
18th St. Viaduct - Between Iowa St. & Minnesota St. (Replacement of Roadway Deck) Walter Lenkeit	6-8-55	1-23-56	63,751.50	63,751.50	Spec.Rd.
13th St. - South Van Ness Avenue to Bryant St. (Widening & Extension) The Fay Improvement Co.	7-15-55	2-28-56	201,005.72	201,005.72	1944 Sewer Bond Major Sts.
Silver Avenue - Mission St. to Thomas Ave. (Pavement Reconstruction & Resurfacing) The Lowrie Paving Co.Inc.	5-2-56	0	198,765.00	1,870.00	Spec.Rd. Major Sts.
Golden Gate Park Connecting Road between State Highway Route 56 and 25th Ave. & Fulton St. (Construction) Chas. L. Harney Inc.	5-9-56	0	15,292.00	0	Major Sts.
Total Awarded and Expended During Fiscal Year			415,062.72	734,112.77	

CURRENT CONTRACT DATA 1955-1956

Street or Subdivision	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS					
Cambridge St. - Felton St. to Bacon St.	S-C-P	The Fay Impr.Co.	8-4-54	8-9-55	$ 23,200.00
Midtown Terrace Subdivision #3-#4 (Streets Within)	S-C-P	Standard Bldg. Co.	10-6-54	3-24-55	135,000.00
Harvard St. (E½) - Burrows St. to Bacon St.	S-C-P	The Fay Impr. Co.	11-17-54	8-8-55	7,200.00
Midtown Terrace - Subdivision #3-#4 Contract #2	S-C-P	Standard Bldg. Co.	3-18-55	11-3-55	70,000.00
Midtown Terrace #3 - Dellbrook Ave.	S-C-P	Standard Bldg. Co.	3-18-55	10-21-55	47,000.00
Bright St. - Stanley St. & Exist.Pavement					
Stanley St. - Orizaba St. & Bright St. & Inter.	C-P	The Fay Impr.Co.	4-6-55	7-25-55	8,400.00
Hudson Ave. - 3rd St. to Phelps St.	C-S-P	The Fay Impr.Co.	5-13-55	10-3-55	12,000.00
Ordway St. - Goettingen St. to Somerset St.	C-S-P	The Fay Impr.Co.	5-18-55	8-18-55	8,050.00
Fowler Ave. - Intersection at Portola Drive & Woodside	P	William Horstmeyer	6-8-55	11-9-55	1,000.00
*Bright St. - Portions - Between Shields St. & Garfield	S-C-P	Chas. L. Harney	6-8-55	4-17-56	15,700.00
Mangels Ave. - Baden St. to Hammerton Ave.					
Mangels Ave. - Intersection Burnside & Hammerton	C-P-S	Lowrie Paving Co.	6-29-55	12-1-55	21,000.00
			- - - -		- - - - -

CURRENT CONTRACT DATA 1955-1956

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS (Continued)					
Dalewood Way - From Lansdale Ave. to 550' E	S-C-P	Chas. L. Harney Inc.	9-14-55	90%	$ 15,000.00
*Thrift St. Portions - Plymouth Ave. & Summit St.	S-C-P	Chas. L. Harney Inc.	9-23-55	30%	10,500.00
Mission St. - Crossing of 21st St.	S	The Lowrie Paving Co. Inc.	9-28-55	10-31-55	800.00
Panorama Terrace - Subdivision No. 1 Contr. 1	S	Standard Bldg.Co.	10-14-55	3-14-56	17,350.00
2nd Ave. at Parnassus Ave.	S	James E. Barnes Constr. Co.	11-9-55	0%	2,000.00
Molimo Drive - 388' N of Myra Way to 400' N'ly	S-C-P	The Lowrie Paving Co.	11-9-55	40%	13,600.00
Jackson St. (S½) East of Drumm St.	S	Barrett Constr.Co.	11-23-55	12-16-55	500.00
Brewster St. - Rutledge & Mullen Ave. Macedonia St. - Brewster & Montcalm Sts. Montcalm St. - Mullen Ave. & Macedonia St. Rutledge St. - Brewster St. & Franconia St. including intersections Macedonia at Brewster & Montcalm	S-C-P	The Lowrie Paving Co. Inc.	11-23-55	5-15-56	20,000.00
Marin St. - Between Michigan St. & Maryland St. Marin St. & Intersections of Georgia & Louisiana Sts.	S-C-P	Eaton & Smith	11-25-55	4-3-56	21,000.00
Garden St. (S½) Between Broderick St. & 35' E	C-P	Pacific Pavements Co. Ltd.	12-7-55	1-18-56	450.00

*Foerster St. (Portions) - Los Palmas & Teresita Blvd.	S-C-P	The Fay Impr. Co.	12-28-55	35%	$ 22,000.00
Phelan Ave. (E ½) Approx. 300' N of Ocean Ave.	C	Chas. L. Harney Inc.	1-4-56	1-30-56	500.00
Panorama Terrace - Subdivision #1 Contr. 2	C-P	The Standard Bldg. Co.	2-17-56	5-1-56	19,000.00
Burnett Ave. - Portola Drive & a line 177' northerly from Glenview Drive	S-C-P	The Fay Impr. Co.	4-6-56	80%	23,500.00
Boutwell St. C/L from existing manhole 141' S of easterly corner of Boutwell St. & Islais Creek Channel thence 186' S	S	The Lowrie Paving Co. Inc.	4-11-56	5-10-56	2,437.00
Kirkham St. - from 3' to 100' west of 9th Ave. (Parking Bay)	C-P	Pacific Pavements Co. Ltd.	5-9-56	99%	600.00
Dicha Alley between Wood St. & Lupine Ave. (Conc. Stairway)	Stair	J. Cyril Johnson	5-16-56	0%	700.00
La Grande Ave.- Crossing of Brazil Ave. N/S	C-P	The Fay Impr. Co.	6-13-56	0%	600.00
26th St. - 60' E Kansas St. to De Haro St.	C-P	The Lowrie Paving Co. Inc.	6-20-56	20%	10,000.00
Total Awarded During Fiscal Year					$ 180,537.00
Total Value of Work Done During Fiscal Year					$ 373,655.00

* Remaining Portions improved under Public Contract

S = Sewers C= Curbs P = Paving - Stairway

CURRENT CONTRACT DATA 1955-1956

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREETS - ASSESSMENT PROCEEDINGS					
Cambridge St. - Bacon St. to Wayland & Intersection	S-C-P	The Fay Impr.Co.	8-4-54	8-9-55	$ 5,897.00 (1,300.00)-
Cambridge St. (W½) Felton St. to 25' South	P	The Fay Impr.Co.	7-14-54	8-9-55	279.00 (200.00)-
Missouri St. - Sierra St. to 22nd St.	S-C-P	Chas. L. Harney Inc.	9-8-54	9-21-55	20,117.00 (700.00)-
Bacon St. - Harvard St. to Cambridge	S-C-P	The Fay Impr. Co.	9-8-54	8-9-55	18,384.00 (6,400.00)-
25th St. - Pennsylvania Ave. to 3rd St.	S-C-P	Chas. L. Harney Inc.	3-25-55	2-4-56	48,705.00 (0)-
Charter Oak Ave. - Helena St. & 250' South Helena St. - Elmira St. & Charter Oak Ave.	S-C-P	Eaton & Smith	4-22-55	2-7-56	18,849.00 (12,300.00)-
Clarendon Ave. - Olympia Way & Laguna Honda Blvd. Olympia Way - Clarendon Ave. & Midtown Terrace	S	M. J. Lynch	5-25-55	9-21-55	61,384.00 (51,772.00)-
Bright St. (Portions) Shields St. & Garfield St.	C-P	Chas. L. Harney Inc.	6-8-55	4-17-56	8,802.50 (5,300.00)-
Dwight St. - Brussels St. & Goettingen St.	S-C-P	Chas. L. Harney Inc.	5-18-55	11-3-55	8,203.60 (4,600.00)-
			- - - -		- - - - -

Bocana St. Wool St. & Powhattan Ave. Intersection Bocana St. (W½) 418' to 490' N of Eugenia Bocana St. (E½) between **Wool** St. & 61' South Wool St. (W½) between Bocana St. & 61' South	C-P	E.J.Treacy	7-8-55	11-29-55	$ 4,326.80 (2,700.00)-
Niantic Ave. between San Mateo & San Luis Ave. Niantic Ave. & San Luis Ave. Intersection	C-P	The Fay Impr. Co.	7-8-55	11-8-55	5,358.00 (2,000.00)-
Alpha St. between Wilde Ave. & Tucker Ave. Tucker Ave. between Alpha N.W. to existing pave.	S-C-P	Chas.L.Harney Inc.	8-31-55	40%	12,057.50 (5,800.00)-
Thrift St. (Portions) from Plymouth Ave. & Summit St.	S-C-P	Chas.L.Harney Inc.	9-23-55	30%	5,353.00 (2,900.00)-
Excelsior Ave. between Athens St. & Moscow St.	S-C-P	The Fay Impr. Co.	9-28-55	6-4-56	6,360.25 (3,800.00)-
La Grande Ave. between Russia Ave. & S'ly Term.	S-C-P	Eaton & Smith	10-19-55	5-31-56	13,868.80 (11,200.00)-
Ellsworth St. between 275' & 350' S of Ellsworth St.	S-C-P	M.J. Lynch	11-4-55	10%	3,585.00 (2,000.00)-
Franconia St. between Mullen **Ave.** & Montcalm St.	S-C-P	The Fay Impr.Co.	11-23-55	6-6-56	4,750.30 (2,900.00)-
* Foerster St. Portions - Los Palmas to Teresita Blvd.	C-P	The Fay Impr. Co.	12-28-55	35%	9,706.60 (6,000.00)-
Bowdoin St. - Bacon to Wayland Sts.	S-C-P	Chas.L.Harney Inc.	12-30-55	5-10-56	11,685.60 (3,000.00)-

CURRENT CONTRACT DATA 1955-1956

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREETS - ASSESSMENT PROCEEDINGS (Continued)					
Pioche St. - Harvard St. to Oxford St.	S-C-P	The Fay Impr. Co.	3-7-56	6-22-56	$ 4,514.00 (2,200.00)-
Olmstead St.- Bowdoin St. & 120' Easterly	S-C-P	The Fay Impr. Co.	3-7-56	6-21-56	3,955.50 (2,500.00)-
Campbell Ave.- Goettingen St. & Somerset St. Somerset St.- Campbell St. & San Bruno Ave. Somerset St.- Intersection of Campbell Ave.	S-C-P	Eaton & Smith	3-16-56	50%	19,063.75 (12,000.00)-
Powhattan Ave.- Bradford St. & Peralta Ave. Powhattan Ave.- Intersections at Bradford & Peralta Peralta Ave.- Powhattan Ave. to S'ly Termination	S-C-P	The Fay Impr. Co.	4-25-56	40%	15,722.90 (5,300.00)-
Innes Ave. (N'ly Side) Hawes St. to Ingalls St.	S	M. J. Lynch	5-2-56	25%	6,474.00 (2,400.00)
Bradford St.- Cortland Ave. to Mojave St.	C-P	E. J. Treacy	5-31-56	0%	8,509.00 (4,300.00)
Burnham St.- Elizabeth St. & 24th St. Burnham St.- Crossing 24th St.	S-C-P	The Fay Impr. Co.	5-31-56	0%	8,787.30 (1,200.00)
Olympia Way- Clarendon Ave.-917'E	C-P	The Fay Impr. Co.	6-27-56	0%	18,445.00 (0)-

Total Awarded During Fiscal Year	$162,523.30
Total Value of Work Done During Fiscal Year	$232,032.34

*Remaining Portions of Street Under Private Contract

( )- Estimated Amount of City Obligation. Balance Through Assessment of Property Benefited. City Funds from Special Road Improvement Fund.

S = **Sewers** C = Curbs P = Paving

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY					
Harvard St. (W½) between Burrows St. & Bacon St. (Curbs-Paving) The Fay Impr. Co.	11-17-54	8-8-55	$ 6,955.00	$ 6,955.00	Spec.Rd.
Golden Gate Park Roads & Other Streets (Resurfacing) The Fay Impr. Co.	12-10-54	7-22-55	74,181.26	39,586.26	Spec.Rd.
Stanley Drive between Junipero Serra Blvd. & Orizaba Ave. (Planting) Huettig & Schromm Inc.	4-1-55	11-11-55	29,594.30	23,969.30	Spec.Rd.
Bright St. (E½) between Stanley St. & 100' N (Reconstruction) The Fay Impr. Co.	4-8-55	9-15-55	1,640.90	1,640.90	Spec.Rd.
El Camino Del Mar & Others (Street Resurfacing) The Lowrie Paving Co.Inc.	6-1-55	8-19-55	20,957.80	20,957.80	Spec.Rd. Major Sts.
Sunset Blvd. between Rivera St. & Ortega St. (Improvement & Planting) Watkins & Sibbald	6-8-55	12-14-55	37,831.26	37,831.26	Spec.Rd.
Anza St. & Others- Brick Pavement Replacement (Reconstruction) Eaton & Smith	9-30-55	2-9-56	48,564.95	48,564.95	Spec.Rd.
Arleta Ave. & Others (Street Resurfacing) The Fay Impr. Co.	11-16-56	4-27-56	147,913.15	147,913.15	Major Sts. Spec.Rd.
DeHaro St. & Others- Brick Pavement Replacing (Reconstruction) The Fay Impr. Co.	3-21-56	5-22-56	23,620.80	23,620.80	Spec.Rd.

Richmond District Streets & Others (Resurfacing) Pacific Pavements Co. Ltd.	3-23-56	6-29-56	$ 89,994.58	$ 89,994.58	Major Sts.
Oak - Grove St. - Harrison St. to Bryant St. (Reconstruction) The Lowrie Paving Co. Inc.	3-30-56	6-12-56	29,343.19	20,343.19	Spec.Rd.Impr. 1954 Sewer Bd.
Washington St.- Broderick to Walnut Sts. & Cherry to Arguello Grove St. - Van Ness to Franklin St. (Resurfacing) Pacific Pavements Co. Ltd.	5-16-56	6-29-56	6,048.80	6,048.80	Major Sts.
Ocean Ave. & Other Locations (Resurfacing) The Fay Impr. Co.	5-31-56	47%	22,908.00	9,095.00	Major Sts.
Total Awarded and Expended During Fiscal Year			$359,393.47	$476,520.99	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
B-4 STREETS - CAR TRACK REMOVAL					
San Jose Ave. between Niagara Ave. & County Line & Other Locations (Track Removal & Pavement Reconstruction) The Fay Impr. Co.	1-19-55	7-22-55	$196,977.52	$ 31,652.52	1947 Str.Impr. Bond Spec.Rd.
Pine St. & Jones St. (Track Removal & Pavement Reconstruction) Eaton & Smith	5-13-55	10-11-55	183,664.39	150,599.39	1947 Str.Impr. Bond Spec.Rd.
Chestnut St. between Van Ness Ave. & Scott St. (Track Removal & Pavement Reconstruction) Chas. L. Harney, Inc.	5-25-55	11-15-55	193,760.77	193,760.77	1947 Str.Impr. Bond Spec.Rd. 1944 Sewer Bond
Stockton St. between Market St. & Tunnel (Track Removal & Pavement Reconstruction) Eaton & Smith	6-15-55	10-12-55	61,487.59	61,487.59	1947 Str.Impr. Bond Spec.Rd.
O'Farrell St. between Market St. & Jones St. (Track Removal & Pavement Reconstruction) The Fay Impr. Co.	7-6-55	11-4-55	72,052.59	72,052.59	1947 Str.Impr. Bond Spec.Rd.
California St. between Van Ness Ave. & Walnut St. (Track Removal & Pavement Reconstruction - Sewers) Chas. L. Harney, Inc.	9-14-55	99%	164,873.50	141,100.00	1944 Sewer Bond 1947 St.Impr. Bond Spec.Rd.
Stockton St. between South Portal of Tunnel & Columbus Ave. (Track Removal & Pavement Reconstruction-Widening) Chas. L. Harney, Inc.	5-9-56	12%	132,295.00	13,600.00	1947 Str.Impr. Bond Spec.Rd. Muni R.R.

~~Total Awarded and Expended During Fiscal Year $369,221.09 $664,252.86~~

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
C - TRAFFIC SIGNALS & CHANNELIZATION					
Turk St. & Golden Gate Ave. between Jones & Divisadero (Traffic signals) Abbett Electric Corp.	1-19-55	7-15-55	$ 67,184.12	$ 17,984.12	Spec. Rd. Impr.
Duboce Ave. & Guerrero St. - Duboce Ave. & Valencia St. McCoppin St. & Valencia St. - Traffic Signals (Installation) Abbett Electric Corp.	3-23-55	7-15-55	9,321.70	7,596.70	Spec. Rd. Impr.
Bryant & Harrison Sts.- Traffic Signals (Contr. #2) Traffic Signal System R. Flatland	4-1-55	11-9-55	50,986.30	19,336.30	Major St. Spec.Rd.Impr.
Fell St. & Oak St. between Shrader St. & Octavia St. (Traffic Signal Installation) Manning & Whitaker	4-13-55 - - - -	12-21-55	97,992.79 - - - - - -	84,552.79	Spec.Rd. Impr.
South of Market Signals-Contr. #1 Installation of Traffic Signals Manning & Whitaker	7-8-55	3-23-56	72,750.55	72,750.55	Spec.Rd. Impr.
Traffic Signals at Various Intersections- Contr. #2 (Modification of) Manning & Whitaker	9-28-55	6-20-56	46,438.28	46,438.28	Spec.Rd. Impr.
19th Ave. & Park-Presidio Blvd. Control Cable & Master Controller R. Flatland	12-21-55	99%	11,277.00	6,675.00	General
Mission St. & Intersection South Van Ness Alemany Blvd.& Intersection Ocean Ave. (Illuminated Traffic Signs) R. Flatland	4-13-56	0	1,340.00	0	Spec.Rd. Impr.

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
C - TRAFFIC SIGNALS & CHANNELIZATION (Continued)					
Traffic Signals at Isolated Crossings-Contr.#14 (Installation) R.Flatland	5-9-56	15%	$ 46,809.50	$ 5,250.00	Major Sts. Spec.Rd.
Guerrero & Camp Sts. (Modifying Master Traffic Signal Controller) R. Flatland	5-11-56	0%	1,445.00	0	Spec.Rd.
Great Highway at Lincoln Way (Channelization) Chas.L. Harney Inc.	6-27-56	0%	109,125.50	0	Major Sts. Spec.Rd.
Total Awarded and Expended During Fiscal Year			$289,185.83	$260,583.74	

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE					
Fillmore St. between Germania St. & Duboce Ave. (Gunite-Lining Sewer) Cement Gun Constr. Co.	4-27-55	7-8-55	$ 7,681.77	$ 7,681.77	General 1954 Sewer Bond
San Marcos Ave. Sewer- Santa Rita to 12th Ave. (Sewer Constr.) M.J.Lynch	5-27-55	9-1-55	2,640.15	2,640.15	1944 Sewer Bond
Diversion Structures at 10th & Harrison, 5th & Howard, 7th & Howard Sts. (Alterations) Arthur Wallgren	6-8-55 - - - -	10-27-55	28,175.00 - - - - -	28,175.00	1954 Sewer Bond
Lincoln Way Sewer between 39th Ave. & 48th Ave. (Construction) M.J.Lynch	10-14-55	96%	198,839.00	163,795.00	1954 Sewer Bond
Union St. - Polk St. to 180' W (Emergency) (Sewer & Pavement Reconstruction) The Lowrie Paving Co.	1-25-56	3-27-56	9,248.00	9,248.00	1944 Sewer Bond
Glen Canyon Sewer- Portola Drive to Glen Park Playground (Sewer Construction) The Fay Impr. Co.	3-30-56	59%	113,334.00	59,925.00	1944 Sewer Bond
Scott St. between Lombard St. & 150' S (Sewer Reconstruction) (Emergency) M.J.Lynch	3-8-56	3-10-56	7,408.88	7,408.88	1944 Sewer Bond
Lincoln Way Sewer Sect "B"- 29th Ave. to Sunset Blvd. (Construction) Walter Lenkeit	4-6-56	14%	211,483.00	25,670.00	1954 Sewer Bond
Stanley Drive Sewer through S.F. State College (Reconstruction) McGuire & Hester	6-27-56	0%	22,755.00	0	1933 Sewer Bond
Total Awarded and Expended During Fiscal Year			$563,067.88	$304,543.80	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
D-2 SEWERS - CONCRETE MONOLITHIC					
Southeast Collecting Sewers Sect. I-2 Ingalls St. Intercepting Sewer from Yosemite Ave. to Fitzgerald Ave. (Construction) Walter Lenkeit	2-2-55	2-21-56	$159,664.46	$ 79,424.46	1948 Sewage Tr.Bond
Southeast Collecting Sewers Sect. I-1 Candlestick Point Sewer Tunnel (Construction) M & K Corporation	5-25-55	52%	680,900.00	308,380.00	1948 Sewage Tr.Bond 1954 Sewer Bond
North Point Collecting Sewers Sect. "A" In Front St. The Embarcadero & Adjacent Sts. (Construction) M & K Corporation	7-13-55	4-26-56	252,694.57	252,694.57	1954 Sewer Bond
Lake Merced Sewer Trestle (Pile Bents-Conc. Piers) P & Z Co.	5-2-56	6-18-56	8,475.48	8,475.48	1944 Sewer Bond
Trocadero Sewer in vicinity Sloat Blvd. & 19th Ave. (Deep Shaft Manhole) Arthur Wallgren	6-15-56	0%	13,333.55	0	1948 Sewage Tr.Bd.
Total Awarded and Expended During Fiscal Year			$274,503.60	$648,974.51	

CURRENT CONTRACT DATA 1955-1956

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
E - MISCELLANEOUS					
Southeast Sewage Treatment Plant - New Mud and Eductor Pumps, Piping, Hoists & Facilities (Installation) F.W. Spencer & Son	12-15-54	7-15-55	$ 36,407.69	$ 9,932.69	1948 Sewage Tr.Bond
Civic Auditorium - Replacement of Elevator Doors - Independent Elev.Co.	2-16-55	7-29-55	9,319.00	9,319.00	General
Fitzgerald Pumping Station & Related Sewers (Construction) M & K Corporation	3-23-55	11-11-55	90,607.41	52,782.41	General 1948 Sewage Tr.Bond
Perry & Harrison St. in the Vicinity of 3rd St. Embarcadero Freeway A.W.S.S. (Alteration) Associated Pipe Line, Inc.	3-4-55	6-30-55	36,909.15	9,459.15	State Highway
City Hall - Southwest Corner - Replacing Hot Water Risers (Alterations) Rodoni-Becker Co. Inc.	3-16-55	7-19-55	7,788.00	4,713.00	General
Woven Wire Fence - Municipal Asphalt Plant (Construction of) San Jose Steel Co.	4-27-55	8-4-55	3,885.80	3,885.80	Spec.Rd.
Southeast Collecting Sewers Sect. H-1-2-3 in Candlestick Drive & Adjacent Areas (Test Borings) J.N. Pitcher Co.	4-27-55	8-11-55	863.68	863.68	1948 Sewage Tr. Bond
Richmond-Sunset Sewage Treatment Plant Additions & Betterments Contr. No. 3.02 (Installation of Boilers) E. A. Cornely Inc.	5-18-55	1-3-56	26,697.67	26,697.67	1948 Sewage Tr.Bond

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
E - MISCELLANEOUS (Continued)					
4th St. Bridge Over Channel St. (Painting) D.E. Burgess Co.	6-8-55	7-20-55	$ 2,820.00	$ 2,820.00	Major Sts.
3rd St. Bridge Over Channel St. Waterway (Welding & Painting Stair Treads) Acme Welding Co.	5-18-55	7-17-55	746.20	746.20	Major Sts.
Main Public Library in Civic Center (Installation of New Switchboards) Manning & Whitaker	6-24-55	10-18-55	13,632.00	13,632.00	General
Adult Guidance Center, 150 Otis St. Installation of Boiler & Related Facilities (Installation) C. Passalacqua & Son	6-24-55	10-4-55	5,110.00	5,110.00	General
Southeast Sewage Treatment Plant - Additions & Betterments Contr. No. 2.09 (Installation of a Mud & Eductor Pump Piping & Related Appurtenances) C. Norman Petersen Inc.	7-29-55	12-7-55	2,697.00	2,697.00	1948 Sewage Tr. Bond
Geneva Ave. between San Jose Ave. & Tara St. (Construction of a Chain Link Fence) Anchor Post Prod. Inc.	8-3-55	11-6-55	1,998.96	1,998.96	Spec.Rd.
Maintenance Yard - Battery Charger Room (Construction) Hart & Hynding	8-17-55	10-5-55	1,969.00	1,969.00	General
Twin Peaks Blvd. Portions -Guard Rail (Construction) U.S. Steel Corp.	8-17-55	10-17-55	3,152.40	3,152.40	Spec.Rd.

Hassler Health Home - Repair of Roof Trusses & Construction of Shear Walls - Arras Bros.	8-24-55	1-3-56	12,223.00	12,223.00	General
El Camino Del Mar - Temporary Road Repairs (Reconstruction) Piombo Construction Co.	8-31-55	10-7-55	7,947.50	7,947.50	Spec.Rd.
Francisco Plaza Housing Project (Curb Reconditioning) Love & Haun	11-4-55	2-2-56	2,640.80	2,640.80	Spec.Rd.
Laguna Honda Home- Turbine Generator Unit (Construction) Anderson & Rowe Inc.	11-9-55	0%	60,338.00	0	1954 Laguna Honda Home Bond
Alemany Blvd. at Onondaga Ave. - Closing Entrance Ways to Pedestrian Underpass - Adam Arras & Son	11-16-55	2-16-56	885.00	885.00	State Highway
Coroners Office & Morgue (Reconstruction of) Beacon Constr. Co.	11-30-55	45%	133,119.00	49,040.00	General
Laguna Honda Home- Boiler & Related Facilities (Construction) Herman Lawson Co.	12-7-55	88%	142,397.00	116,195.00	1954 Laguna Honda Home Bond
Removal of Abandoned Municipal Railway Poles & Appurtenances -E.J. Treacy	12-7-55	5-24-56	21,829.55	21,829.55	1947 St. Imp.Bond
Bureau of Traffic Fines - City Hall Ventilating Equipment William McIntosh & Son	12-14-55	5-1-56	1,988.00	1,988.00	General
Arkansas St. between 100' & 275' South of 19th St. Concrete Sidewalk - Love & Haun	12-14-55	2-21-56	388.50	388.50	Spec.Rd.

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
E - MISCELLANEOUS (Continued)					
North Point Collecting Sewers Sect. B-1 (Test Borings) J.N. Pitcher Co.	12-14-55	2-14-56	$ 917.10	$ 917.10	1954 Sewer Bond
Laguna St. from Golden Gate Ave. to Eddy St. (Installation of Fire Alarm System Conduit & Appurtenances)- R. Flatland	12-30-55	1-31-56	1,888.65	1,888.65	General
Air Raid Sirens - 27 at Various Locations (Installation) Brayer Electric Co.	1-27-56	88%	19,796.00	12,975.00	General
North Point Sewage Treatment Plant Additions and Betterments Contract No. 2.03 (Resurfacing Concrete Floors, Piping & Miscellaneous Work) Arthur W. Baum	1-4-56	5-9-56	7,855.00	7,855.00	1954 Sewer Bond
Log Cabin Ranch (Install Sludge Pump Piping, etc. (Anderson & Rowe Inc.)	2-1-56	5-11-56	3,020.00	3,020.00	General
Turk St. from Scott St. to Buchanan St. Fire Alarm System - Conduit & Appurtenances (Abbett Electric Co.)	2-1-56	4-3-56	1,384.25	1,384.25	General
Southeast Sewage Treatment Plant Contract No. 2.06 (Stairs, Handrails, Ladders, etc.) Adam Arras & Son	2-10-56	20%	17,170.00	2,625.00	1954 Sewer Bond
San Francisco Flower Terminal (Reconstruction of Curb) Chas. L. Harney,Inc.	2-15-56	0	5,714.00	0	Spec.Rd.

(Reconstruction of Curb) Chas. L. Harney, Inc. 2-15-56 0 5,714.00 0 Spec.Rd.

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
E - MISCELLANEOUS (Continued)					
Richmond-Sunset Sewage Treatment Plant (Additions & Betterments) Contract No. 3.C4 Sludge Pumps, Gas Compressor Gas Meter, etc. (Scott Co.)	3-14-56	15%	$ 13,967.00	$ 1,575.00	1948 Sewage Tr.Bond
Southeast Collecting Sewers Section G-1-2-3 Yosemite Pumping Station Diversion Structure - Force Main & Connecting Sewer (Construction) M & K Corporation	3-21-56	0	335,440.00	0	1954 Sewer Bond
San Francisco Hospital Boiler Breechings (Construction) Ace Boiler & Welding Works	3-23-56	0	8,323.00	0	General
City Hall - West Half - Replace Hot Water Risers (Robert M. Johnson)	4-11-56	34%	17,333.00	4,350.00	General
City Attorney's Office Fluorescent Lighting Fixtures (Eveready Electric Co.)	4-11-56	5-25-56	5,731.00	5,731.00	General
Civic Center - Steam & Condensate Return Lines (Repair) Rodoni Becker Co.	4-13-56	0	12,130.00	0	General
3rd & 4th St. Bridges over the Channel St. Waterway (Cleaning & Painting) Robert Thompson	5-4-56	80%	14,477.00	8,250.00	Major Sts.
Broadway Tunnel West Ventilating Bldg. (Landscaping and Paving) The Lowrie Paving Co., Inc.)	5-11-56	98%	4,384.00	3,400.00	Spec.Rd.

CURRENT CONTRACT DATA 1955-56

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-56	Fund
E - MISCELLANEOUS (Continued)					
Richmond-Sunset Sewage Treatment Plant (Additions & Betterments) Contract No. 3.03 (Channel Gates) M.J. Lynch	5-31-56	0	$ 11,200.00	$ 0	1948 Sewage Tr.Bond
County Jail No.1 -At Washington St. & Dunbar Alley (Installation Heating & Ventilating System)	6-20-56	0	8,714.00	0	General
Laguna Honda Home (Steel Water Storage Tank & Related Appurtenances) Constr. Pittsburgh Des Moine Steel Co.	6-22-56	0	49,100.00	0	General
Civic Center Powerhouse (Conversion of Power Plant) Robert M. Johnson	6-20-56	0	13,266.00	0	General
Portola Drive Widening - Dorchester Way & Rex Ave. (Test Borings) J.N. Pitcher	6-22-56	0	684.80	0	Spec.Rd.
Ocean Ave. -Parking Lots at 19th Ave. & at Junipero Serra (Construction of Parking Lots) Pacific Pavements Co., Ltd.	6-29-56	0	9,630.00	0	1947 Off St. Parking Bond
Total Awarded and Expended During Fiscal Year			$955,698.51	$416,887.31	

APPENDIX II

BUREAU OF ARCHITECTURE
CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Construction
July 1, 1955 - June 30, 1956

Table	Type of Construction	Contracts No.	Awarded Aggregate Value	Amount Expended Fiscal Year 1955-1956
A-1	New School Building Cons.	2	$3,851,755.00	$3,143,850.63
A-2	Miscellaneous Alterations	10	499,914.50	315,156.99
A-3	Acoustical Jobs	1	10,757.00	17,491.00
A-4	Roofing Jobs	4	27,164.00	39,469.00
A-5	Resilient Flooring	2	22,636.00	28,702.00
A-6	Interior and/ or Ext. Painting	11	247,367.00	142,038.00
A-7	Yard Paving	6	160,016.68	90,173.02
B-1	Fire Dept. - Soil Tests	1	663.50	663.50
B-2	Fire Dept. - New Construction	2	504,870.00	791,552.18
B-3	Fire Dept. - Reconstruction	3	271,661.33	300,990.30
C-1	San Francisco Hospital	13	1,504,028.70	236,880.50
C-2	Laguna Honda Home	8	2,501,897.89	348,854.89
D	M. H. deYoung Memorial Museum	4	17,654.00	14,609.00
E	Civic Center	1	3,323.00	9,383.00
F	Youth Guidance Center	3	66,548.00	21,247.24
G	Miscellaneous	10	305,909.99	253,990.19
	TOTALS	80	$9,996,166.59	$5,755,051.44

On the following pages appear separate tables of current contracts for each of the types of construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
1948 School	Unified School District, bond issue voted by citizens on November 2,1948, $48,890,000.
1952 Fire	Fire Department, bond issue voted by citizens on November 4, 1952, $4,750,000.
1954 Hospital	Hospital, bond issue voted by citizens on November 2, 1954, $5,830,000.
1954 L. H. H	Laguna Honda Home, bond issue voted by citizens on November 2, 1954, $5,475,000.
1944 Juv. Home	Juvenile Home and Court, bond issue voted by citizens on November 7,1944, $1,250,000.
1948 Juv. Ct.	Juvenile Court and Detention Home, bond issue voted by citizens on June 1, 1948, $2,750,000.

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-1-NEW SCHOOL BUILDING					
City College Cafeteria					
Ira H. Larsen Co.	3-10-54	9-21-55	$ 423,750.14	$ 68,107.14	
Broadway Plumbing Co.	3-10-54	9-21-55	169,325.40	29,123.40	
Hampton Elec. & Mfg. Co.	3-10-54	9-21-55	74,540.67	14,903.67	1948 School
Funston-Santiago JHS (Herbert Hoover JHS)					
James I. Barnes Const. Co.	5-14-54	6-12-56	2,482,947.66	929,498.00	
Anderson & Rowe, Inc.	5-14-54	99%	393,152.00	148,583.00	
Emil J. Weber Elect. Co.	5-14-54	99%	155,776.00	57,965.00	1948 School
Sunnydale Elementary School (Phase II)					
Elvin C. Stendell	10-20-54	12-16-55	192,418.94	67,179.94	
F.W.Spencer & Sons, Inc.	10-20-54	12-16-55	32,157.25	16,723.25	
Emil J. Weber Elec. Co.	10-20-54	12-16-55	13,430.00	5,439.00	1948 School
Lake Merced Elementary School					
S.J.Amoroso Const. Co.	10-20-54	5- 8-56	812,199.70	518,676.70	
M. Desiano	10-20-54	5-24-56	149,552.92	95,678.92	
Emil J. Weber Elec. Co.	10-20-54	5-24-56	54,900.00	23,770.00	1948 School
Patrick Henry Elementary School (Phase II)					
Ira H. Larsen Co.	1- 7-55	2- 1-56	133,787.61	78,140.61	1948 School
Commodore Stockton Elementary School					
Henderson Const. Co.	6- 1-55	60%	669,000.00	374,565.00	
James A. Nelson Co.	6- 1-55	55%	89,838.00	54,607.00	
Emil J. Weber Elec. Co.	6- 1-55	55%	30,300.00	18,058.00	1948 School
	- - - -		- - - -		

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
Luther Burbank JHS					
M & K Corporation	11- 9-55	30%	$2,216,000.00	484,513.00	
James A. Nelson Co.	11- 9-55	25%	410,880.00	23,028.00	
Scott-Buttner Elec.Co.Inc.	11- 9-55	25%	196,460.00	62,610.00	1948 School
Ridgepoint No. 2 Elem. School					
S.J.Amoroso Const. Co.	4-18-56	5%	828,828.00	68,106.00	
Herman Lawson Co.	4-18-56	2%	163,287.00	4,575.00	
Hampton Elec. & Mfg. Co.	4-18-56	1%	36,300.00	0	1948 School
Total Awarded and Expended During Fiscal Year			$3,851,755.00	3,143,850.63	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-2 MISCELLANEOUS ALTERATIONS					
Fairmount Elementary School (Engineering Services) Lyle E. Patton	3- 2-55	10-24-55	$ 1,800.00	$ 1,800.00	1948 School
Polytechnic High School (New Windows, Boys' Gymnasium Bldg.) Wm. McIntosh & Son	4-13-55	9- 2-55	18,924.00	18,924.00	1948 School
Horace Mann JHS, and Alamo, Cleveland, Geary, Fairmount, Golden Gate, LeConte & Longfellow Elementary Schools (Alterations & Conversions, Heating Plants) Robert M. Johnson	5-18-55	9-30-55	90,656.00	87.281.00	1948 School
Fairmount Elementary School (Electrical Work) Emil J. Weber Elec. Co.	5-25-55	8-27-55	22,900.00	22,900.00	1948 School
Administration Building (New Electric Passenger Elevators) Otis Elevator Co.	6- 1-55	4-16-56	53,670.00	53,670.00	General
Balboa HS & George Washington HS (Alterations, Counseling Rooms) Stenmark Const. Co.	6- 8-55	9-30-55	14,043.40	14,043.40	1948 School
Abraham Lincoln High School (Plumbing Work) Scott Co.	6- 8-55	10-25-55	625.00	625.00	General

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Funds
City College of San Francisco (Relocation of Machine Shops) Beacon Const. Co.	7-13-55	12-30-55	$ 62,997.21	$ 62,997.21	1948 School
City College of San Francisco (Relocation of Portable Class-Room Bldgs.) Beacon Construction Co.	8-17-55	2- 9-56	22,486.00	22,486.00	General
City College of San Francisco (Reconstruct.Electronic Lab.) L. J. McDermott	2-21-56	6-24-56	30,430.29	30,430.29	1948 School
Aptos Junior High School (New Windows & Ext.Painting) Beacon Construction Co.	4- 4-56	0%	81,660.00	0	General
Commodore Sloat School (New Windows & Ext. Painting) Beacon Construction Co.	4- 4-56	0%	50,818.00	0	General
Excelsior, Francis Scott Key, Marshall, Sanchez and Sunshine Elem. Schools (Heating Plant Conversions) Robert M. Johnson	5-16-56	0%	77,747.00	0	1948 School
George Peabody School (Exterior Reconstruction Work & New Windows) Wm. McIntosh & Son	6-13-56	0%	71,226.00	0	1948 School

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-2 MISCELLANEOUS ALTERATIONS (Continued)					
Junipero Serra School (New Windows & Ext. Repairs) Wm. McIntosh & Son	6-13-56	0%	$ 65,773.00	0	1948 School
Horace Mann JHS & Everett JHS (Alterations to Home Mak.Lab.) L. J. McDermott	6-13-56	0%	21,791.00	0	1948 School
Burnett School to John Swett School (Relocation of Portable Classroom Buildings) William McIntosh & Son	6-15-56	0%	14,986.00	0	General
Total Awarded and Expended During Fiscal Year			$499,914.50	$315,156.90	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-3 ACOUSTICAL JOBS					
Benjamin Franklin JHS (Acoustical Treatment Work in the Library Western Asbestos Co.	5-11-55	7-26-55	$ 724.00	$ 724.00	1948 School
Fairmount Elementary School Fiberglas Engineer.& Supply Div. Owens-Corning Fiberglas Corp.	5-18-55	9- 1-55	16,767.00	16,767.00	1948 School
Argonne Elementary School (Acoustical Treatment Work Reconstruction) The Brookman Co. Inc.	5-16-56	0%	10,757.00	0	1948 School
Total Awarded and Expended During Fiscal Year			$10,757.00	$17,491.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-4 ROOFING JOBS					
Raphael Weill Elementary School (New Roof for Main Bldg. & Auditorium Wing) Western Roofing Service	4-13-55	7-13-55	$ 5,275.00	$ 5,275.00	General
Sarah B. Cooper Elem. School (Re-Roofing) Regal Roofing Co.	4-13-55	7-11-55	4,051.00	4,051.00	General
Yerba Buena Elem. School (Roof Reconstruction) Arthur W. Baum	4-13-55	9- 5-55	16,600.00	16,600.00	1948 School
Cleveland Elem. School (Re-Roofing) Wm. J. Anderson Roof. Co.Inc.	4-27-55	8- 1-55	3,932.00	3,932.00	General
City College of San Francisco, Science Building (Roof Repairs) Regal Roofing Co.	6-22-55	12-30-55	4,099.00	4,099.00	General
Board of Education Warehouse Building (Re-roofing) Regal Roofing Co.	6-29-55	9-15-55	5,512.00	5,512.00	General
Board of Education Administration Bldg. (Re-Roofing portion) Regal Roofing Co.	4-18-56	0%	14,392.00	0	General
Bayview Elementary School (Re-Roofing) Regal Roofing Co.	5- 2-56	0%	3,887.00	0	General

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
Starr King Elementary School (Re-Roofing) Regal Roofing Co.	5- 2-56	0%	$ 4,037.00	0	General
Luther Burbank Junior High School (Re-Roofing and Patching) Anchor Roofing Co.	6-29-56	0%	4,848.00	0	General
Total Awarded and Expended During Fiscal Year			$27,164.00	$39,469.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-5 RESILIENT FLOORING					
Golden Gate, Grattan, Madison & Cleveland Elem. Schools (Floor Reconstruction William McIntosh & Son	5- 4-55	9- 8-55	$15,271.00	$15,271.00	General
Board of Education, Administration Building (Resilient Flooring) William O'Connor Co.	6-22-55	9-16-55	13,431.00	13,431.00	General
City College of San Francisco, Science Building (Resilient Flooring) L.D. Reeder Co. of San Francisco	5-23-56	0%	6,850.00	0	General
Polytechnic High School, Shop Bldg. (Floor Reconstruction) H. E. Rahlmann Co.	6-15-56	0%	15,786.00	0	General
Total Awarded and Expended During Fiscal Year			$22,636.00	$28,702.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-6 INTERIOR AND/OR EXTERIOR PAINTING					
Andrew Jackson Elementary School (Interior & Exterior Painting) Russell Hinton Co.	3-30-55	8-15-55	$ 9,256.00	$ 9,256.00	General
Alta Vista Elementary School (Interior Painting) R. P. Paoli & Co.	4- 6-55	8-15-55	6,460.00	6,460.00	General
Jean Parker Elem. School (Interior & Ext. Painting) Beck Bros.	4-13-55	9- 1-55	13,488.00	13,488.00	General
Redding Elementary School (Interior Painting) A. Quandt & Sons, Inc.	4-13-55	9- 1-55	11,711.00	11,711.00	General
West Portal Elem. School (Interior & Ext. Painting) Industrial Painting Co.	4-13-55	9- 1-55	15,985.00	15,985.00	General
Washington Irving Elem. School (Interior & Ext. Painting) Robert A. Thompson	4-13-55	8-15-55	10,641.00	10,641.00	General
San Francisco Continuation High School (Interior Painting) Robert A. Thompson	4-27-55	9-14-55	9,300.00	9,300.00	General
Sarah B. Cooper Elem. School (Interior Painting) Marco A. Vidal	4-27-55	9- 1-55	10,970.00	10,970.00	General

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-6 INTERIOR AND/OR EXTERIOR PAINTING (continued)					
Raphael Weill Elem. School (Interior & Ext. Painting) Dave Russ	4-27-55	9- 1-55	$ 19,649.00	$19,649.00	General
Irving M. Scott Elem. School (Interior & Ext. Painting) Robert A. Thompson	4-27-55	8-15-55	9,700.00	9,700.00	General
Grant Elem. School (Interior Painting) Dave Russ	5- 4-55	9- 1-55	10,800.00	10,800.00	General
Aptos Junior High School (Interior Painting of Certain Rooms) New Method Paint. & Dec. Co.	5-11-55	8- 1-55	2,950.00	2,950.00	General
Francis Scott Key Elem. School (Interior Painting) Russell Hinton Co.	5-18-55	8-15-55	11,128.00	11,128.00	General
Fairmount Elementary School (Interior Painting) R.P. Paoli & Co.	3-23-56	0%	13,940.00	0	General
Dudley Stone Elem. School (Interior & Ext. Painting) Dave Russ	4- 4-56	0%	21,988.00	0	General
Edward Robeson Taylor Elem. School (Interior & Ext. Painting) J. Wm. Sorensen	4- 4-56	0%	21,397.00	0	General

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
Alamo Elementary School (Interior Painting) Dave Russ	4- 4-56	0%	$ 14,445.00	0	General
Abraham Lincoln High School (Interior Painting) B. P. Paoli & Co.	4-18-56	0%	26,840.00	0	General
Jedediah Smith Elem. School (Interior & Ext. Painting) Martin Fried, Inc.	4-18-56	0%	8,777.00	0	General
Monroe Elementary School (Interior Painting) A. Quandt & Sons, Inc.	4-18-56	0%	12,200.00	0	General
George Washington High School (Interior Painting) Deemer & Deemer, Inc.	5- 2-56	0%	68,299.00	0	General
McKinley Elem. School (Interior Painting) Robert G. Meyer	5- 2-56	0%	11,221.00	0	General
Cabrillo Elementary School (Interior & Ext. Painting) Dave Russ	5-16-56	0%	12,760.00	0	General
Administration Building (Exterior Paint.& Cleaning) D. Zelinsky & Sons	5-23-56	0%	35,500.00	0	General
Total Awarded and Expended During Fiscal Year			$247,367.00	$142,038.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
A-7 YARD PAVING					
Argonne Elementary School (Yard Paving) Eaton & Smith	5- 4-55	8-31-55	$ 13,688.62	$13,688.62	1948 School
City College of San Francisco (Asphaltic Concrete & Rock Base Pavement, Student Park.Area #1) Charles L. Harney, Inc.	10-19-55	5- 4-56	13,840.00	13,840.00	1948 School
City College of San Francisco (Asphaltic Concrete & Rock Base Pavement, Student Park.Areas Nos. 2 & 3) Fay Improvement Co.	12-21-55	62%	45,296.28	35,604.00	1948 School
Madison Elementary School (New Play Yard) Martinelli Const.Co., Inc.	1- 6-56	6-15-56	27,040.40	27,040.40	1948 School
Bayview Elementary School (Yard Paving) Pacific Pavements Co., Ltd.	5-16-56	0%	34,600.00	0	1948 School
Frank McCoppin Elem. School (Yard Paving) The Fay Improvement Co.	5-23-56	0%	26,280.00	0	1948 School
Sheridan Elementary School (Yard Paving) Pacific Pavements Co., Ltd.	6-13-56	0%	12,960.00	0	1948 School
Total Awarded and Expended During Fiscal Year			$160,015.68	$90,173.02	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
B-1 FIRE DEPARTMENT - TEST BORINGS & SOIL ANALYSIS					
Engine House No. 38, Project 20 - - - - Woodward-Clyde & Associates	12- 2-55	1- 5-56	- - - - $ 663.50	$663.50	1952 Fire
Total Awarded and Expended During Fiscal Year			$ 663.50	$663.50	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
B-2 FIRE DEPARTMENT - NEW CONSTRUCTION					
Engine House No. 26, Project 6 (General Construction, Plumb. Mechanical & Elect. Work) Martinelli Construction Co.Inc.	12-17-54	3-29-56	$226,299.89	$226,299.89	1952 Fire
Engine House No. 34, Project 4 (General Construction, Plumb. Mechanical and Elect. Work) Cahill Construction Co.	12-31-54	12-23-55	204,823.68	130,138.68	1952 Fire
Engine House No. 40, Project 7 (General Construction, Plumb. Mechanical & Elect. Work) Ira H. Larsen Company	2- 4-55	5-23-56	212,577.75	174,209.75	1952 Fire
Engine House No. 11, Project 9 (General Construction, Plumb. Mechanical & Elect. Work) Peter Sartorio Co.	3- 4-55 - - -	1-16-56	191,192.86 - - - -	150,712.86	1952 Fire
Engine House No. 45, Project 11 (General Construction, Plumb. Mechanical & Elect.Work) Antone Petersen & Sons	10-14-55	38%	129,980.00	50,062.00	1952 Fire
Engine House No. 12, Project 2 (General Construction, Plumb. Mechanical & Elect. Work) M & K Corporation	12-14-55	30%	374,890.00	60,129.00	1952 Fire
Total Awarded and Expended During Fiscal Year			$504,870.00	$791,552.18	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
B-3 FIRE DEPARTMENT - RECONSTRUCTION					
Engine House No. 5, Project 103 (General Construction, Plumb. Mechanical & Elect. Work) Antone Petersen & Sons	1-26-55	11- 4-55	$ 96,006.90	$ 15,544.90	1952 Fire
Engine House No. 27 (New Overhead Doors for Storage Room) Arthur W. Baum	4-20-55	7-20-55	1,653.12	1,653.12	General
Engine House No. 46, Project 128 (Reconstruction) Hart & Hynding, Inc.	4-20-55	2- 2-56	57,249.11	39,711.11	1952 Fire
Engine House No. 6, Project 111 (Reconstruction) Hart & Hynding, Inc.	6-29-55	3-23-56	97,647.84	97,647.84	1952 Fire
Engine House No. 49, Project 116 (Reconstruction) Wm. McIntosh & Son	9-7 -55	1-12-56	21,499.20	21,499.20	1952 Fire
Engine House No. 20, Project 130 (General Construction, Plumb. Mechanical & Elect. Work) Hart & Hynding, Inc.	9- 7-55	5-14-56	109,378.13	109,378.13	1952 Fire
Engine House No. 41, Project 109 (General Construction, Plumb. Mechanical & Elect. Work) Peter Sartorio	3- 9-56	10%	140,784.00	15,556.00	1952 Fire
Total Awarded and Expended During Fiscal Year			$271,661.33	$300,990.30	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
C-1 DEPARTMENT OF PUBLIC HEALTH- San Francisco Hospital					
New Electric Passenger Elevators, Ward Bldgs. Nos. 10, 30,40 Pacific Elevator & Equip. Co.	2-10-54	9-30-55	$107,772.80	$ 25,326.80	General
Alterations to Main Kitchen Dishwashing, Serv.Bldg.6 Wm. McIntosh & Son	6- 8-55	95%	17,355.00	13,391.00	General
Roasting Oven, Main Kitchen Wm. McIntosh & Son	6-29-55	10-17-55	13,852.00	13,852.00	General
Installation of Fire Road and Miscellaneous Work, Phase II Hart & Hynding, Inc.	7-20-55	2-17-56	24,424.00	24,424.00	General
Alterations for New Elevators & Stair Enclosures, T.B. Group Hart & Hynding, Inc.	10-14-55	65%	104,406.00	73,619.00	General
Replacement of Existing Water Softener Tanks, Power Plant A. C. LoPrest Co.	1-18-56	4- 6-56	8,061.70	8,061.70	General
Exterior Paint. Serv.Bldg.#6 Deemer & Deemer	1-18-56	3-14-56	2,420.00	2,420.00	General
Exit Stairways, Ward Bldgs. Nos. 10, 20, 30, and 40 Monson Bros.	1-27-56	50%	127,119.00	64,123.00	1954 Hosp.
Installation of Duplex Selective Collective Control, A&B Elev. Ward Bldgs. 10, 20, and 40 Pacific Elev. & Equip. Co.	3- 9-56	29%	62,372.00	11,663.00	1954 Hosp.

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
C-1 DEPARTMENT OF PUBLIC HEALTH - San Francisco Hospital (Continued)					
New Incinerator and Related Work, Service Building No. 2 (Morgue) Plibrico Sales Service	3- 9-56	5 %	$ 14,995.00	0	1954 Hosp.
Garbage Can Washing Facilities, Central Kitchen Stores, Bldg. No. 6 Arthur W. Baum	3-23-56	25%	3,972.00	0	General
Salvageable Refuse Storage Building William McIntosh & Son	4-11-56	45%	3,777.00	0	1954 Hosp.
Installation of a Duplex Selective-Collective Control System A & B Elevators, Ward Bldg. 30 Pacific Elev. & Equip. Co.	4-11-56	25%	24,700.00	0	1954 Hosp.
Alterations to Bakery & Vegetable Preparation Room Hart & Hynding, Inc.	4-25-56	2%	53,970.00	0	General
Alterations to Admitting Ward & Social Service Beacon Construction Co.	4-27-56	0%	253,822.00	0	1954 Hosp.
Alterations to Maternity Bldg. No. 80 Rothschild, Raffin & Weirick	6-20-56	0%	819,990.00	0	1954 Hosp.
Total Awarded and Expended During Fiscal Year			$1,504,028.70	$236,880.50	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
C-2 DEPARTMENT OF PUBLIC HEALTH Laguna Honda Home					
Alterations to Main Kitchen, Bakery & Commissary Beacon Construction Co.	3-11-55	95%	$ 270,869.00	$156,065.00	1954 LHH & General
Alterations & Additions to Ward Serv. Kitchens, Ward Bldgs. E,K,L & M Portions of Proj. 5 & 8 Arthur W. Baum	7-20-55	2-20-56	19,363.00	19,363.00	1954 LHH
Reroofing & Misc. Waterproof. of Ward Bldgs. M & O Bender Roofing Co.	9-14-55	11-22-55	9,746.00	9,746.00	General
Elevators, Connect. Corridors & Related Work, Project 3 Hart & Hynding, Inc.	11- 4-55	50%	366,983.00	147,943.00	1954 LHH
Weatherproof. Work at Main Bldg. & Bldg. "A" William McIntosh & Son	11-16-55	3-29-56	15,737.89	15,737.89	General
Demolition of Farm Group Bldgs. Flora Crane Service, Inc.	6-13-56	0%	5,369.00	0	General
Alterations to Clarendon Hall, Project No. 1 Rothschild, Raffin & Weirick	6-20-56	0%	1,423,760.00	0	1954 LHH
Alterations to Ward Bldg. "A", Staff Offices & Rel. Work, Project No. 6 Rothschild, Raffin & Weirick	6-22-56	0%	243,700.00	0	1954 LHH & General
Alterations & Add. to Power Plant & Related Work, Project #2 Rothschild, Raffin & Weirick	6-27-56	0%	417,239.00	0	1954 LHH & General
Total Awarded and Expended During Fiscal Year			**$2,501,897.89**	**348,854.89**	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
D-M. H. deYOUNG MEMORIAL MUSEUM					
Miscellaneous Roof Repairs and Damp-proofing Western Roofing Service	5-18-55	7-20-55	$ 2,575.00	$ 2,575.00	General
New Oak Panelled Room Stenmark Construction Co.	11-18-55	4-20-56	9,463.00	7,239.00	General
Storage Racks for Painting Michel & Pfeffer Iron Works, Inc.	12-30-55	2-23-56	4,795.00	4,795.00	General
Security Wire Fence Colorado Fuel & Iron Corp. Pacific Coast Division	4- 6-56	0%	580.00	0	General
New Ceiling, Oakes Ante Rooms Nos. 2 and 3 Stenmark Construction Co.	4-25-56	99%	2,816.00	0	General
Total Awarded and Expended During Fiscal Year			$17,654.00	$14,609.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
E-CIVIC CENTER					
City Hall, Repair to Marble Floors Vermont Marble Company	3-16-55	8-15-55	$ 3,850.00	$3,850.00	General
City Hall, Alterations to Women's Toilet, Third Floor Stenmark Construction Co.	4-6-55	8-12-55	3,344.00	2,210.00	General
Civic Auditorium, Installation of Asphalt Tile, 2nd Floor Corridor William O'Connor Co.	12- 2-55	2-17-56	3,323.00	3,323.00	General
Total Awarded and Expended During Fiscal Year			$ 3,323.00	$9,383.00	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
F - YOUTH GUIDANCE CENTER					
Interior & Ext. Painting Certain Cottages Robert A. Thompson	5-25-55	10- 3-55	$13,700.00	$13,700.00	General
Miscellaneous Work, Nursery Bldg. C-1 Wm. McIntosh & Son	6- 1-55	11-25-55	7,547.24	7,547.24	General
Alterations & Additions to Wire Fencing Wulfert Co., Inc.	4-18-56	0%	10,876.00	0	1944-48 Juv. Ct.
Closet Doors & Miscellaneous Repairs Wm. McIntosh & Son	5-11-56	0%	2,966.00	0	General
Log Cabin Ranch School for Boys, San Mateo County (Recreation Hall - Project No. 1) Antone Petersen & Sons	5-16-56	0%	52,706.00	0	General
Total Awarded and Expended During Fiscal Year			$66,548.00	$21,247.24	

CURRENT CONTRACT DATA 1955-1956

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Expended 1955-1956	Fund
G - MISCELLANEOUS					
Public Welfare Dept., 150 Otis Street, Alterations Wm. McIntosh & Son	4-29-55	9-23-55	$ 43,231.20	$39,772.20	General
Ground Observer Shelter, San Francisco Disaster Council & Corps Wm. McIntosh & Son	6-10-55	8-10-55	2,986.00	2,986.00	General
	- - - -		- - - -		
Sunset Branch Library (Ortega Branch) General Construction Robert L. Wilson	8-24-55	6- 8-56	148,680.99	148,680.99	General
Main Library, Civic Center Resilient Flooring L. D. Reeder Co. of San Francisco	11- 4-55	1-27-56	3,873.00	3,873.00	General
Northern Police Station, Window Alterations Stenmark Construction Co.	11-23-55	6- 1-56	3,051.00	3,051.00	General
Planning-Art Commission Bldg., Exterior Painting Robert A. Thompson	12- 9-55	2-17-56	1,620.00	1,620.00	General
California Palace of Legion of Honor Remodeling of Theatre & Exits Wm. McIntosh & Son	1- 6-56	6-27-56	44,226.00	44,226.00	General
45 Hyde Street, Miscellaneous Alterations & Painting Stenmark Construction Co.	3- 9-56	95%	2,779.00	1,741.00	General

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1955-1956	Fund
War Memorial Veterans' Bldg., Alterations to Basement Meeting Room Stenmark Construction Co.	3-16-56	60%	$ 18,527.00	$ 7,086.00	General
War Memorial Veterans' Bldg., Miscellaneous Alterations for New Rental Gallery Lounge, SF Museum of Art Stenmark Construction Co.	4-25-56	50%	2,394.00	954.00	General
150 Otis Street, Fire Doors William McIntosh & Son	5-11-56	0%	5,527.00	0	General
California Palace of Legion of Honor Alterations, Phase II Antone Petersen & Sons	6-20-56	0%	75,232.00	0	General
Total Awarded and Expended During Fiscal Year			$305,909.99	$253,990.19	

SF

ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1957

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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1957

GEORGE CHRISTOPHER	MAYOR
THOMAS A. BROOKS	CHIEF ADMINISTRATIVE OFFICER
SHERMAN P. DUCKEL	DIRECTOR OF PUBLIC WORKS

DEPARTMENT OF PUBLIC WORKS - MR. S.P. DUCKEL - DIRECTOR AND STAFF

TOP ROW, LEFT TO RIGHT:

S. Franklin, Supervisor Central Permit Bureau

S.J. Sullivan, Superintendent Bureau of Street Cleaning

W.C. Zecher, Superintendent Bureau of Building Repair

F.D. Brown, Superintendent Street Repair

B. Benas, Superintendent, Sewer Repair and Sewage Treatment

J.J. McCloskey, Supervisor Bureau of Accounts

BOTTOM ROW, LEFT TO RIGHT:

L.C. Bush, Superintendent Building Inspection
J.H. Devitt, Assistant City Architect
C.W. Griffith, City Architect
R.H. Owens, City Engineer
S.P. Duckel, Director, DPW
L.J. Archer, Assistant Director, Maintenance and Operation
R.B. Larter, Assistant Director, Administrative
C.J. Geertz, Assistant City Engineer
J.T. Hester, Engineering Analyst

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I – Current Contract Data, Bureau of Engineering

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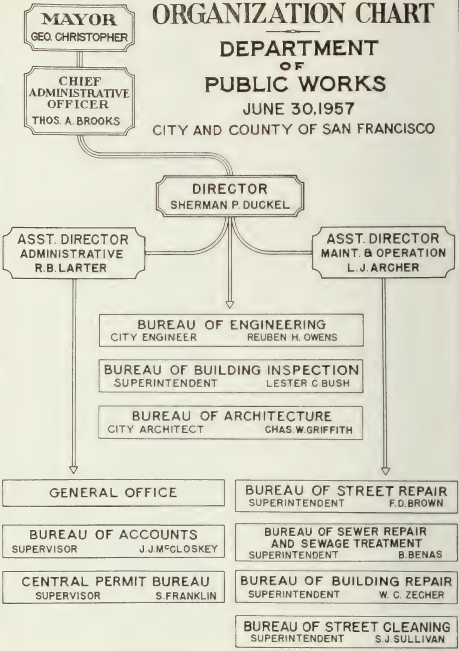
ORGANIZATION CHART

DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1957

CITY AND COUNTY OF SAN FRANCISCO


MAYOR
GEO. CHRISTOPHER
CHIEF ADMINISTRATIVE OFFICER
THOS. A. BROOKS
DIRECTOR
SHERMAN P. DUCKEL
ASST. DIRECTOR ADMINISTRATIVE
R.B. LARTER
ASST. DIRECTOR MAINT. & OPERATION
L. J. ARCHER
BUREAU OF ENGINEERING
CITY ENGINEER REUBEN H. OWENS
BUREAU OF BUILDING INSPECTION
SUPERINTENDENT LESTER C BUSH
BUREAU OF ARCHITECTURE
CITY ARCHITECT CHAS. W. GRIFFITH
GENERAL OFFICE
BUREAU OF ACCOUNTS
SUPERVISOR J. J. McCLOSKEY
CENTRAL PERMIT BUREAU
SUPERVISOR S. FRANKLIN
BUREAU OF STREET REPAIR
SUPERINTENDENT F. D. BROWN
BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
SUPERINTENDENT B. BENAS
BUREAU OF BUILDING REPAIR
SUPERINTENDENT W. C. ZECHER
BUREAU OF STREET CLEANING
SUPERINTENDENT S. J. SULLIVAN

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE
DIRECTOR OF PUBLIC WORKS

260 CITY HALL
SAN FRANCISCO 2,
CALIFORNIA

January 15, 1958

ANNUAL REPORT
1956-1957

Honorable Thomas A. Brooks
Chief Administrative Officer
City and County of San Francisco

Dear Mr. Brooks:

The annual report of the Department of Public Works for the fiscal year ending on June 30, 1957, is respectfully submitted herewith in accordance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

The report is divided into six major sections which cover in some detail the activities of the nine Bureaus of the Department. Summaries of the data pertaining to the current construction contracts administered by the Bureaus of Architecture and Engineering will be found in the Appendices at the end of the report. Detailed operational data on the three sewage treatment plants are compiled in a separate report which will be made available to those interested.

During the past year a total of 212 contracts were awarded at a contract value of $15,401,266.00, an increase of 13.5% over last year's total. The major part of these contracts were financed by the various bond issues mentioned in the reports of the Bureaus of Architecture and Engineering. Such work has been expedited to the full extent of the manpower available. The shortage of professional engineers for entrance grade positions and the loss of engineers who leave City service for other positions still continues to handicap the work program to some extent.

All bureaus carried on their assigned functions in an efficient manner and a detailed listing of their activities will be found in this report.

For their fine co-operation and effort in conducting their respective operations I thank the two Assistant Directors and the bureau heads. I am also very grateful to you, Mr. Brooks, for your generous help and support in matters concerning the Department.

Very truly yours,

Sherman P Duckel

Sherman P. Duckel, Director
Department of Public Works

DEPARTMENT OF PUBLIC WORKS

The following activities are Department-wide in nature and, therefore, not covered in the individual Bureau reports which follow.

CIVIL DEFENSE

This Department is one of nine Municipal Divisions of the San Francisco Disaster Council and Corps. Its mission in the event of a natural or man-made disaster would be: to assist in heavy rescue operations; to clear the streets of debris for emergency vehicular operations; to inspect and repair all damaged public buildings; to assist in the inspection of damaged private buildings as a general safety measure for the public; to repair damaged streets and sewers; and to assist other Divisions as necessary. Personnel of the Recreation-Park Department would join the Public Works Division in time of disaster.

A Standard Operating Procedure booklet, distributed to all key supervisory personnel, and a Manual of General Instructions, distributed to all personnel, set forth the procedure of Division personnel in disaster operations. Provisions are made for a prime and secondary Mobilization Area to which personnel report for further instructions and directions after a disaster occurs.

Since 1952 the Department has participated in at least one civil defense drill each year by manning the Disaster Corps Control Center and the Department's Mobilization Area with all supervisory personnel, and with the participation of a majority of the Department's 24 radio-equipped vehicles.

During the past year there was held "Operation Quiver", a state-wide simulated earthquake disaster, and "Operation Alert-1956" the nation-wide Civil Defense exercise in each of which the Department took active part.

SAFETY PROGRAM

In March of 1952 a safety program was inagurated by the Department at the request of Mr. T. A. Brooks, Chief Administrative Officer. This program was established with the formation of a Safety Committee in each Bureau; appointment of a Chairman of each committee; and scheduling of monthly meetings. At these meetings the Committees discuss each injury of the preceding month as to means of preventing recurrence of similar injuries, and any other business relevant to safety. The Engineering Analyst of the Department was appointed Safety Director and acts as secretary of a Staff Safety Committee composed of the Bureau Safety Chairmen. This Committee also meets monthly and reviews the Department personnel injuries as well as all matters pertaining to safety.

The Department is a member of the San Francisco Chapter of the National Safety Council and from this organization receives, monthly, such safety aids as posters, booklets and magazines.

During the past year the Department incurred a total of 79 lost-time injuries, with a frequency rate (number of lost-time injuries per one million man-hours worked) of 26. This compares with the high year total of 113 lost-time injuries, with a frequency rate of 41. These figures indicate that the safety program is producing favorable results but much work remains to be done in order to materially lower this injury rate.

The injury record for each Bureau, and the Department, for the 1956-1957 fiscal year is as follows:

INJURIES

BUREAU	LOST-TIME	NO LOST-TIME	TOTAL	FREQUENCY RATE**
Architecture (61)*	0	2	2	0
Building Inspection (55)	3	4	7	19
Building Repair (346)	22	27	49	28
Engineering (231)	1	11	12	2
Sewer Repair and Sewage Treatment (243)	16	12	28	34
Street Cleaning (380)	24	33	57	34
Street Repair (173)	13	19	32	37
Others (66)	0	0	0	0
DEPARTMENT (1555)	79	108	187	26

* (Employees)

**Frequency Rate is the number of lost-time injuries incurred per million man hours worked. Lost-time injury is one in which person does not work on day following injury.

EARTHQUAKE

At 11:45 AM on Friday, March 22, 1957, San Francisco and the suburbs to the southwest were struck by an earthquake of 5.5 intensity (Richter scale). The epicenter of the quake was determined to be in the vicinity of the Westlake subdivision on the San Andreas

Fault, just south of the southwest corner of the City limits. In San Francisco the intensity varied and damage to structures was very nominal.

The extent of damage to City-owned facilities was determined by this Department with City engineering personnel and private structural engineers.

No evidence was found of damage to sewers or water mains. Only one section of improved roadway suffered damage, this being a stretch of about 1,450 feet of the Lake Merced Boulevard. Damage in this location varied from the sliding of the berm and adjacent equestrian path, to the slip of two-thirds of the roadway into the bordering lake. The roadway was barricaded within an hour of the earthquake and was reopened to traffic on April 11, 1957.

The McCreery Branch Library, which was constructed in 1903 and survived the 1906 earthquake, incurred major structural damage to the extent that it was condemned and will be razed.

Other City-owned buildings, including schools and libraries, requiring minor repairs as a result of the earthquake are listed as follows:

1) Presidio Branch Library - repairs to chimney top, light fixture supports and plaster.
2) Main Library - repairs to seven-story steel book stack, plaster and repointing of open joints in ornamental masonry columns.
3) Park-Presidio Junior High School - repairs to chimney cap.
4) Sheridan School - repairs to roof.

MOBILE RADIO SYSTEM

In 1954 the Department put into operation a mobile radio system consisting of two-way radios in 24 vehicles, a control station at the Department Maintenance Yard, a control station at the Disaster Corps Control Center and a Dispatch Station in the City Hall. This equipment was purchased with Federal, State and City matching funds obtained by the Disaster Corps.

The units are used in daily operations particularly by the maintenance and repair Bureaus and have materially increased the efficiency of field operations and control of personnel.

During the year 13,154 calls were made, an average of 52 calls per working day.

STREETS UTILITIES COMMITTEE

The San Francisco Streets Utilities Committee, composed of representatives of all private and public utilities in the City, was organized in 1953. The Director of the Department of Public Works is Chairman of this Committee which has been meeting bi-monthly since its formation.

Its purpose is to coordinate all work involving street excavations towards the end of reducing to a minimum the opening up of newly constructed or resurfaced streets, and to minimize traffic interference caused by such work.

Each year a list of the proposed utility projects for the subsequent fiscal year is compiled and distributed to all committee members. By reference to this list each utility may coordinate its work with others.

The Committee has published a booklet titled "Minimizing Traffic Interference Caused By Utility Work In Streets" which was distributed to the foremen of work crews as a guide to their street excavation operations as they relate to safety of personnel and traffic interference.

By cooperative rather than regulatory methods the Committee has virtually eliminated the cause of street work complaints from merchants in the downtown and outlying business districts during the Christmas holiday season. In a defined area of the central downtown district no street work, other than emergency, which would impede traffic flows is done between December 1st and January 1st of each year. In all other business districts the time limit is from December 15th to January 1st.

A schedule of restrictions on street work for a group of named streets has also been prepared. The list indicates the hours during which traffic and/or parking lanes must be open on the designated streets. Observance of these restrictions is also cooperative rather than regulatory in nature and the results attained have been excellent.

MISCELLANEOUS

The following activities, briefly given, were accomplished during the year:

1. A review was made of 284 State Assembly and Senate Bills proposed by the legislature, relating to the Vehicle Code, Streets and Highways Code, Public Health and Safety Code, Housing Code and others, as to the suggested City's recommended action.

2. With the pending move of a Major League baseball team to San

Francisco, a study and report was made as to:

a) the feasibility of enlarging the existing baseball stadium and
b) other possible sites, including cost estimates of the stadium and parking facilities.

3. Investigation and report was made on 34 Merit Award suggestions concerning the operation of this Department.

4. The employees of the Department contributed $9,123 to the annual United Crusade campaign, an increase of 27% over the previous year's total.

DEATHS AND RETIREMENTS OF DEPARTMENT PERSONNEL DURING FISCAL YEAR 1956-1957

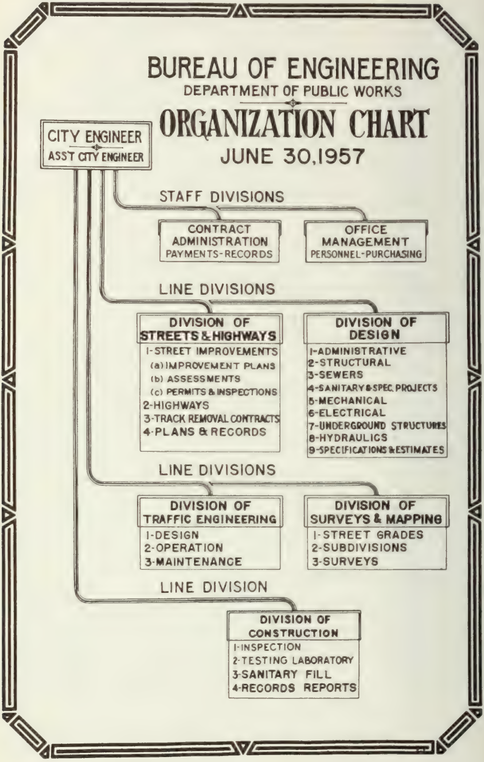
The Department lost the valued services of the following personnel by reason of death or retirement:

NAME	CLASSIFICATION	YEARS SERVICE	CAUSE	
BUREAU OF BUILDING INSPECTION:				
Johannes Skytte	Senior Engineer	19	Retired	2.1.57
David L. Stewart	Building Inspector	30	Retired	8.1.56
Francis H. Stewart	Building Inspector	22	Retired	11.1.56
BUREAU OF BUILDING REPAIR:				
Frank G. Gracia	Watchman	6	Died	7.8.56
William H. Wisecarver	Electrician	15	Died	11.12.56
Oscar R. Cook	Plumber	15	Retired	11.1.56
William H. Duveneck	Elevator Operator	14	Retired	6.1.57
Hugh S. Fraser	Painter	34	Retired	4.1.57
Adrian Garnett	Foreman Carpenter	8	Retired	2.1.57
Edward W. Greninger	Plumber	33	Retired	12.1.56
Alfred C. Honey	Window Cleaner	31	Retired	7.1.56
Herbert Jagow	Electrician	24	Retired	4.1.57
Elmer E. Locke	Elevator Operator	21	Retired	3.1.57
George F. Loftus	Janitor	33	Retired	8.1.56
Albert F. Millikin	Steamfitter	10	Retired	10.1.56
Herbert E. Reed	General Foreman Electrician	20	Retired	9.1.56
Harold S. Yost	Plumber	32	Retired	1.1.57

DEATH AND RETIREMENTS OF DEPARTMENT PERSONNEL DURING FISCAL YEAR 1956-1957

Continued

NAME	CLASSIFICATION	YEARS SERVICE	CAUSE	
BUREAU OF ENGINEERING:				
Alfred J. Duttke	Draftsman, Civil	23	Retired	8.1.56
John L. Slater	Engineer, Civil	32	Retired	6.13.57
Robert H. Williams	Draftsman, Civil	23	Retired	1.1.57
BUREAU OF SEWER REPAIR:				
Donald Anderson	Laborer	10	Died	6.20.57
Cornelius Cronin	Sewer Cleaner	19	Died	12.11.56
Charles F. Talty	Jr. Operating Engineer	2	Died	4.13.57
Denis Carroll	Sewer Cleaner	31	Retired	8.1.56
BUREAU OF STREET CLEANING:				
Reginald A. Bruce	Laborer	12	Died	3.13.57
Louis Corvi	Laborer	19	Died	11.30.56
John D. Romero	Laborer	5	Died	12.27.56
A.C. Smith	Laborer	2	Died	7.18.56
Onorio Canepa	Laborer	8	Retired	3.1.57
Joseph Lalli	Laborer	15	Retired	9.1.56
John H. Leighton	Laborer	15	Retired	12.1.56
Peter Rooney	Laborer	30	Retired	7.17.56
Ignacio Ruiz	Laborer	13	Retired	3.1.57
Anselmo F. Schuler	District Director of Street Cleaning	27	Retired	5.1.57
Walter Leo Stobing	Laborer	11	Retired	5.1.57
Bartley P. Ward	Laborer	6	Retired	1.5.57
BUREAU OF STREET REPAIR:				
Charles M. Bauer	Asphalt Finisher	19	Died	2.18.57
Benjamin T. Culleton	Operating Engineer	4	Died	1.9.57
Sam Anzelone	Asphalt Worker	11	Retired	11.1.56
Walter G. Creyer	Gardener	2	Retired	6.1.57
Nygep Habip	Asphalt Worker	12	Retired	4.1.57
Luis Lazo	Asphalt Worker	11	Retired	9.1.56
Rene L. Mesmin	Laborer	10	Retired	8.1.56


BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
JUNE 30, 1957
CITY ENGINEER
ASS'T CITY ENGINEER
STAFF DIVISIONS
CONTRACT ADMINISTRATION
PAYMENTS-RECORDS
OFFICE MANAGEMENT
PERSONNEL-PURCHASING
LINE DIVISIONS
DIVISION OF STREETS & HIGHWAYS
1-STREET IMPROVEMENTS
(a) IMPROVEMENT PLANS
(b) ASSESSMENTS
(c) PERMITS & INSPECTIONS
2-HIGHWAYS
3-TRACK REMOVAL CONTRACTS
4-PLANS & RECORDS
DIVISION OF DESIGN
1-ADMINISTRATIVE
2-STRUCTURAL
3-SEWERS
4-SANITARY & SPEC. PROJECTS
5-MECHANICAL
6-ELECTRICAL
7-UNDERGROUND STRUCTURES
8-HYDRAULICS
9-SPECIFICATIONS & ESTIMATES
LINE DIVISIONS
DIVISION OF TRAFFIC ENGINEERING
1-DESIGN
2-OPERATION
3-MAINTENANCE
DIVISION OF SURVEYS & MAPPING
1-STREET GRADES
2-SUBDIVISIONS
3-SURVEYS
LINE DIVISION
DIVISION OF CONSTRUCTION
1-INSPECTION
2-TESTING LABORATORY
3-SANITARY FILL
4-RECORDS REPORTS

BUREAU OF ENGINEERING

Reuben H. Owens, City Engineer

GENERAL REVIEW OF YEAR'S WORK

The functions of the Bureau remained unchanged. Their character is indicated by the organization chart.

The volume of work was greater than the preceding year. The number of contracts increased by 12 to 114 and their aggregate value was over $6,300,000, an increase of over 75 percent. Contract payments made during the year increased by 30 percent and totaled over $5,000,000.

The number of assessment and private contracts for street improvements rose, by two, to 39 while their value doubled almost half a million dollars. These figures, however, afford an interesting contrast with those of thirty years ago when there were 408 assesment and private contracts and the 122 assessment jobs totaled $970,000 at prices only a little over a third of todays prices. At that time large areas of the city were undeveloped. Now, relatively few streets are unpaved and the tempo of initial street improvements has naturally, in contrast to widenings and major improvements, been decidedly modified.

HIGHLIGHTS OF THE PAST YEAR

During the year there was little change in the engineering employment situation. The supply of qualified engineers continued short of the demand and few requisitions for the professional classifications could be filled.

In January the Automotive Safety Foundation presented its report on "Street Transportation - Improving Its Management in San Francisco" to the Board of Supervisors by whom it had been engaged as a first step toward betterment of street traffic conditions. The report proposed the creation of a new city department to be known as the Department of Transportation in which, by transfers from the present departments and new employments, would be gathered all functions relative to streets including street and highway design, construction, maintenance and cleaning, traffic engineering, lighting and on and off-street parking. Analysis of the proposal, in which the Bureau participated extensively, revealed the new department would need 112 new employments at an annual cost of $732,000. Two alternative proposals, more modest in their scope, but aimed at the general objectives of the report, were developed. The first contemplated a new bureau within the Department of Public Works and the second, known as Plan C, would strengthen the existing bureaus, in relation to functions affecting street transportation, by the addition of 36 new employments, 24 being in this Bureau, at a yearly cost of $229,500. The proposals, each of which includes the transfer by charter amendment to the Department of Public Works of the engineering functions now in the Police Department, were under review by the Mayor's Traffic Advisory Committee at the end of the fiscal year.

SUMMARY OF CONTRACTS

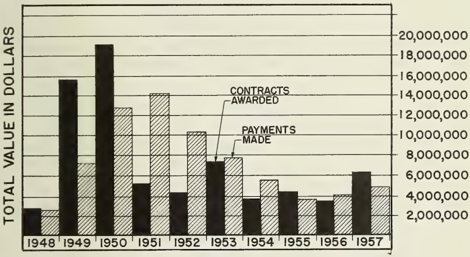
The current contracts which were awarded or were under way during the fiscal year under plans and specifications prepared by the Bureau are summarized in Table I. This summary is repeated for convenience at the beginning of Appendix I which lists each of the individual contracts that comprise the several construction categories. Both the Table and Appendix show the amounts expended on the contracts during the fiscal year whether work began that year or during a previous fiscal year and whether the work was or was not yet completed.

The value of contracts awarded and the annual expenditures are shown graphically for a ten year period in Figure 1. The locations of most of the contracts awarded are indicated in Figure 2.

TABLE I
CURRENT CONTRACT DATA SUMMARY
SHOWING ALL CONTRACT WORK AWARDED OR UNDER WAY
July 1, 1956 - June 30, 1957

Table	Type of Construction	Number	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1956-1957
A	Major Thoroughfares	2	$2,677,083.20	$1,338,647.71
B-1	Streets - Private Contracts	25	318,830.00	257,921.00
B-2	Streets - Assessment Proceedings	14	168,306.35	167,163.11
B-3	Streets - Public Contract City Pay	8	429,280.55	391,041.22
B-4	Streets - Car Track Removal	3	498,104.52	557,051.76
C	Traffic Signals and Channelization	8	317,958.13	244,923.36
D-1	Sewers - Pipe, Vitrified Clay and Concrete	6	633,470.50	580,152.77
D-2	Sewers - Concrete Monolithic	3	475,016.00	463,259.20
E	Miscellaneous	45	798,052.76	1,032,404.96
	TOTALS	114	$6,316,102.01	$5,032,565.09

CONTRACTS AWARDED AND PAYMENTS MADE



FISCAL YEAR ENDING JUNE 30

FIG. 1

PUBLIC BUILDING AND MISCELLANEOUS PROJECTS CONTRACTS

The contract summary in Table E and the detailed listing contained in Appendix I include a number of contracts for the improvement of public buildings and other facilities. Brief descriptions, with contract costs, of some of these "Capital Improvement" projects follow:

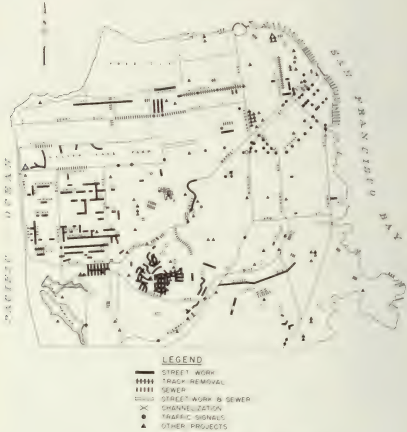
Christmas Tree Point Radio Communications Center
Contract Cost - $269,265.90

This project consisted of improving an area on the easterly slope of Twin Peaks to provide a park-type development of the prominent site with its panoramic view of the City and Bay and building a radio communications center to replace the over-taxed and antiquated facilities of the Police Department and provide facilities to accommodate the Civilian Defense and Disaster Corps and all other departments now having or contemplating the use of radio communication.

The improvements will include roadways to and about the site area, parking areas, an observation plaza on the roof of the communications building which is almost entirely underground. Suitable planting was to be done in a subsequent contract.

Asphalt Plant Convenience Station and Truck Sheds
Contract Cost - $16,292

Awarded and completed during the year was a contract for a concrete block building housing a lunch room and toilet facilities for the plant employees, and truck sheds for four trucks.



LOCATION OF CONTRACTS AWARDED

FIG. 2

Broadway Tunnel Landscaping,
West Ventilation Building
Contract Cost - $4,384

The work consisted of landscaping the unimproved areas adjacent to the West Ventilation Building to improve their appearance and provide a sheltered area with benches for public use.

Ocean Avenue Parking Lots
Contract Cost - $10,109.75

Work consisted of constructing and landscaping two parking lots on Ocean Avenue at Junipero Serra Boulevard and at 19th Avenue to be leased to the local merchants by the Parking Authority.

Farmers' Market Paving
Contract Cost - $4,290

An area of 24,000 sq. ft. was paved to provide 67 additional parking spaces. About 10,000 sq. ft., sufficient for about 29 cars, remains to be paved when funds are provided.

Auxiliary Water Supply System

During the year, two contracts for the relocation of existing Auxiliary Water Supply System lines were completed.

The first was necessitated by the State's construction of The Embarcadero Freeway (Contract cost - $4,444.44) and the second by its construction of the Central Freeway (Contract cost - $3,475).

City Hall Main Switchboard and Feeder
Contract Cost - $62,675.58

A new electrical service was installed in the City Hall. The work included a new main switchboard, bus duct and other appurtenances necessary to replace the existing obsolete and badly overloaded system. The new equipment provides for an ultimate electrical load of 3,000 amperes, the equivalent of almost 1500 horsepower.

City Hall Floodlights
Contract Cost - $28,418.00

This job substitutes a modern weatherproof system for the old and badly weathered floodlights on the four faces of the City Hall. A novel feature was the lighting of the lantern and spire high atop the dome. A total of 176 floodlighting fixtures with a total connected load of about 72 k.w. were incorporated into the system.

Outfall Gate at Marina Pump Station
Contract Cost - $10,260.00

The existing gate, to control the quantity of storm flow through the station and also permit the flushing of the diversion structure serving the station, had become inoperative. The contract consisted of reconstructing the vault housing, the gate and its appurtenances to permit proper access for maintenance, and included the installation of a new electrically controlled gate with remote control equipment at the Pump Station main control board. Work could only be done at periods of lower low tide. This allowed a maximum of only four hours at odd times, usually early morning or late at night. The installation is now functioning satisfactorily.

City Hall - Hot Water Lines and Heat Exchangers
Contract Cost - $17,635.00

Several years ago, a continuing program was begun to replace obsolete plumbing and mechanical systems in our older public buildings, some of which had deteriorated so badly as to overwhelm the efforts of the City's maintenance forces. This contract covered replacement of the old steel hot water supply risers in one quadrant of the City Hall with copper tubing. The results of the program to date have been most satisfactory and it is expected the program will be extended to other public buildings as rapidly as appropriations permit.

During the year, the Bureau prepared budget estimates for capital improvements for various departments. In addition to 135 regular budget items, 25 supplemental budget request estimates were made.

In addition, electrical mechanical and structural plans, specifications and estimates were made for the Bureau of Architecture for inclusion in certain of its contracts for the reconstruction of fire houses, new improvements at the San Francisco Hospital and Laguna Honda Home, and other miscellaneous jobs as summarized below. These jobs included $252,000 worth of electrical construction, $315,000 mechanical and $13,000 structural, for a total of $580,000.

AIR RAID SIRENS

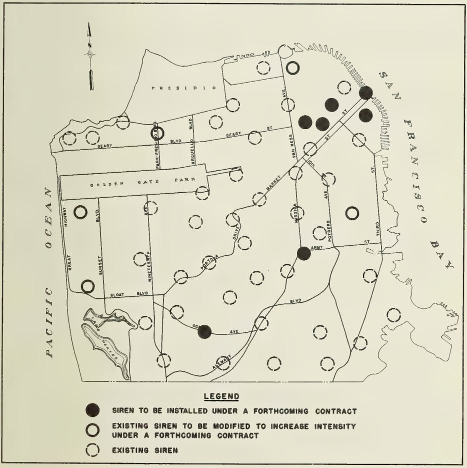
At the outbreak of the Korean War, it was decided that the Air Raid Warning System that had been dismantled at the end of World War II should be restored. The new system consisted of new electric sirens and of five large gasoline-engine-driven sirens salvaged from the old system.

The resulting system performed satisfactorily until the disaster warning signals were changed by the Federal Civil Defense Administration and could not be made without expensive modification of the gasoline-engine-driven sirens control system. As the installations also needed a general overhauling, it was found best to replace the 5 gasoline-engine-driven sirens with new electric sirens.

Subsequent tests showed additional sirens were required to insure the signals would be heard in certain areas of the City. The sum of $29,000 has since been provided for ten additional sirens. When completed, the system will consist of thirty-five 10-HP, fifteen 7-1/2-HP and one 9-1/2-HP uni-directional sirens. The locations of the sirens are shown on Figure 3.

Due to the topography of San Francisco and the prevailing winds, it was found impossible to predict accurately the area that will be effectively served by each siren. The problem had to be solved by an empirical approach of installing essential sirens, testing the system, and adding sirens as needed. This approach was best suited to accommodate the needs of the City as building, and traffic with its attendant noise level, increased to the west and south.

A survey of the noise level was made throughout the City. It was found that San Francisco is a relatively quiet City, the major noise source being traffic. The observed noise level ranged from approximately 55 db in residential areas to over 90 db on downtown Market Street.



LOCATIONS OF SIRENS

FIG. 3

FREEWAY PROGRAM

CITY FREEWAYS

The City has authorized two freeway projects on routes not in the State Highway System. One designated as the City's portion of the Southern Freeway is between the James Lick Memorial Freeway and the proposed Southern Crossing of the Bay. The second is the Crosstown Freeway between the State Southern Freeway at Mission Street and a temporary terminus at Seventh Avenue and Lawton Street.

Southern Freeway

Preliminary planning of the City's Southern Freeway was completed by the firm of DeLeuw, Cather and Company, Consulting Engineers, whose report was submitted on July 13, 1956 to the Director of Public Works. The route as proposed in the report was adopted by the Board of Supervisors on December 10, 1956.

Under the second phase of their contract, DeLeuw, Cather and Company immediately commenced work on the final design plans and specifications which will require 18 months to complete.

Crosstown Freeway

Preliminary plans and estimates are scheduled for completion in November 1957. DeLeuw, Cather and Company are performing this work also under contract. Shortly after their report is received, public hearings to explain the project will be held by the Department of Public Works. The plans will then be forwarded to the Board of Supervisors for formal route adoption and authorization to proceed with final planning.

STATE FREEWAYS

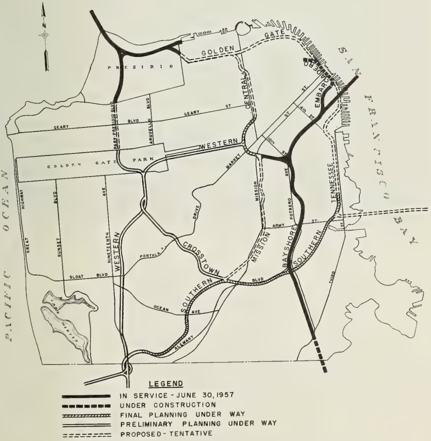
The Embarcadero Freeway

The construction of the giant interchange structure between The Embarcadero Freeway and the Main Street-Beale Street ramps on the one hand, and the San Francisco-Oakland Bay Bridge and the James Lick Memorial Freeway on the other, is partially complete and portions are now open to traffic. Final completion is scheduled for July 1957.

The construction of the main leg of The Embarcadero Freeway between Howard Street and Broadway is progressing rapidly under a State of California, Division of Highways contract awarded on November 16, 1956. This will be the first double-deck freeway constructed in San Francisco and the first freeway constructed north of Market Street.

James Lick Memorial Freeway

The James Lick Memorial Freeway will be the first completed freeway in San Francisco with the opening in July 1957 of the so called "over-water section" between Third Street and Bayshore Boulevard and the County Line. This Freeway is a major link in the freeway network of the Trafficways Plan adopted in 1951 by the City.



PLAN OF FREEWAY SYSTEM
FIG. 4

FREEWAYS

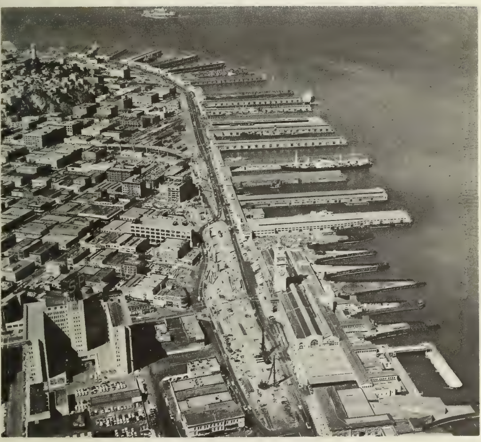
EMBARCADERO FREEWAY

Two Level Freeway

Under Construction

Courtesy Division of Highways
State of California

FREEWAYS



EMBARCADERO FREEWAY

Two Level Freeway

Under Construction

Courtesy Division of Highways
State of California

Central Freeway

The State Division of Highways received bids for the second unit of the Central Freeway extending northerly from the end of the first unit at Thirteenth Street and Mission Street. The contract will be awarded in July 1957. This is a double-deck structure crossing over Market Street at Octavia Street and extending to connections with the City street system at Golden Gate Avenue and Franklin Street and at Turk and Gough Streets.

Southern Freeway

Final detailed plans for the Southern Freeway between the James Lick Memorial Freeway interchange and Mission Street are being prepared by the State of California, Division of Highways. The acquisition and clearing of right-of-way is progressing rapidly along the entire adopted route.

Western Freeway

The Department of Public Works at the request of the Board of Supervisors has engaged the firm of Wilber Smith and Associates, Consulting Engineers, to conduct an independent study of the west of Twin Peaks area to determine (a) whether a freeway is necessary and (b) if so, where should the route be located. The study under (a) will be completed in December 1957 and, if the answer is affirmative, an additional three months will be required to complete part (b).

The State has suspended its planning studies pending the completion of the Smith report and adoption of a route by the City.

STREET AND HIGHWAY IMPROVEMENTS

During the 1956-1957 fiscal year, thirteen street and highway contracts were awarded at a total cost of $3,604,468. These contracts, the largest of which amounted to $2,444,830, accounted for the improvement of approximately 28.04 miles of city streets and highways. They were financed from the City's share of the State gasoline taxes and City bond funds. The individual contract data is listed in Appendix 1, Tables A, B-3 and B-4.

MAJOR THOROUGHFARES

Two of the above contracts were for the improvement of 2.52 miles of major thoroughfares. The total value of these two contracts, $2,677,083, was more than six times greater than that of the three contracts awarded in this category last year.

Market Street Widening

The contract for the widening and realignment of Market Street between Hattie Street and Portola Drive was awarded on July 18, 1956.

This is the third unit in the four-stage improvement of the Market Street-Portola Drive route from Douglass Street to Sloat Boulevard. The final unit, Portola Drive from Twin Peaks Boulevard to Sloat Boulevard, will be advertised for bids in October 1957.

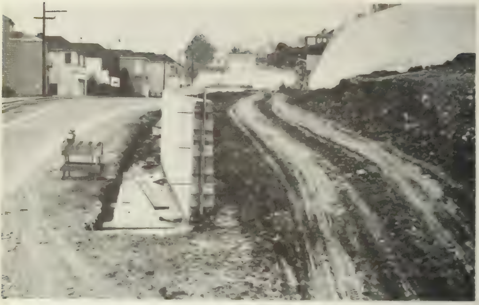
This contract includes the construction of the following structural elements: 125,200 square feet of roadway viaducts, two pedestrian overpasses, and extensive retaining walls. Geological investigation during the planning stage showed the undesirability of adding fill to slopes in some areas which were already unstable. The realignment required the use of viaducts to carry the new roadway in these areas.

The greater portion of the viaducts will be of normal reinforced concrete construction, with 20-foot spans supported on 24-inch poured in place concrete columns extending to rock. However, 45,360 square feet of viaduct will be built using precast prestressed concrete girders of 60-foot spans. In this area, the viaduct is as much as 55 feet above ground and the use of precast girders will eliminate the need for expensive falsework. Forms for the poured-in-place deck will be supported from the adjacent girders.

The two pedestrain overpasses will also be constructed with prestressed concrete girders. The overpass at Romain Street will have precast girders with a span of 102 feet. The overpass at 23rd Street will have cast in place post tensioned girders with a center span of 97 feet and cantilever end spans of 25 feet and 23 feet-6 inches, an over-all length of 145 feet-6 inches. The use of prestressed concrete made it economically possible to avoid using center piers in the median strip of Market Street and yet retain the low maintenance costs of concrete construction. The precast girders will be erected on week-ends, reducing interference with the heavy traffic on Market Street. This use of prestressed concrete marks the first use of this relatively new structural development by the Department in any of its construction. Both overpasses have open type spiral ramps supported on columns at their easterly ends. The ramp at 23rd Street descends 32 feet, including three complete turns of spiral ramp, to Grand View Avenue

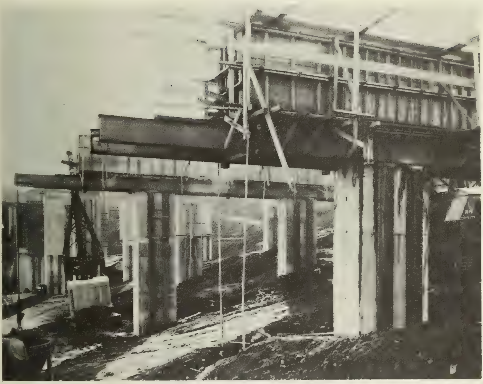
STREET IMPROVEMENTS

Eight contracts, aggregating $429,280, accounted for the rehabilitation of deteriorated pavement on 23.21 miles of City streets. Two, totaling $292,670, were for resurfacing and the remainder were for complete reconstruction.



MARKET STREET WIDENING
Median Wall Under Construction

MARKET STREET WIDENING
Prestressed Concrete Beams



MARKET STREET WIDENING
Bent Construction for Prestressed Concrete Viaduct

Pavement Vibration Study

With the co-operation of the Seismograph Station of the University of California, pavement vibration study was undertaken to determine whether vibration complaints received by the City from disturbed residents could be traced to pavement failures or defects. Forty-six test readings were taken at twenty different locations, thirteen of which were at the complainants' locations and seven were at control locations. The general conclusion of the study was that the powerful diesel and gasoline engines that are used in trucks, buses and similar vehicles, cause sound vibrations which are of far greater intensity than vibrations caused by irregular pavement. These sound vibrations impinge on the structure and cause the complaints. The vibration caused by irregular or defective pavement was of such intensity and frequency as to preclude its causing plaster cracks or damage to a building.

Maiden Lane Reconstruction

The reconstruction of Maiden Lane from Stockton Street to Kearny Street was removed from the realm of routine reconstruction work through co-operative planning with architects employed by the Lane's merchants. As a result the merchants were enabled to transform the Lane into an attractive tree lined promenade which, with approval of the Board of Supervisors, is reserved for pedestrains from mid-morning to mid-afternoon.

TRACK REMOVAL AND STREET RECONSTRUCTION

During the year, three track removal contracts totaling $498,105 were awarded, one of which was completed and the others were nearing completion. The aggregate street length was 2.36 miles. One of these contracts, the removal of the Washington Street Cable Car track between Hyde Street and Steiner Street, encountered some legal interference engendered by cable car enthusiasts but nevertheless was rapidly approaching completion.

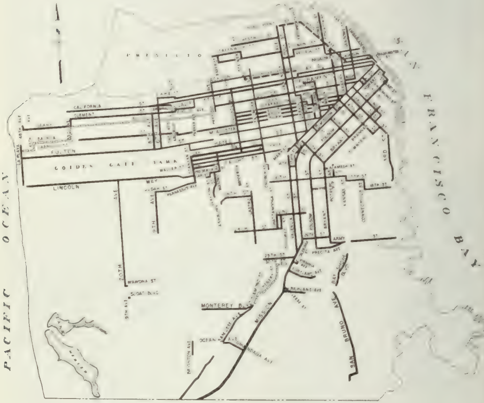
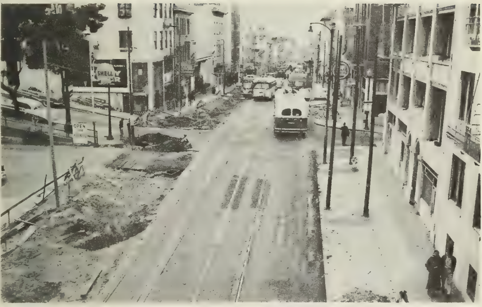
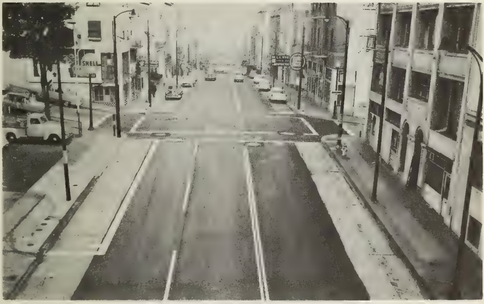


FIG. 5
TRACK REMOVAL PROGRAM
(to June 30, 1957)



STOCKTON STREET TRACK REMOVAL
AND WIDENING
During Construction



STOCKTON STREET TRACK REMOVAL
AND WIDENING
After Construction

To date street car and cable car tracks have been removed from 110.67 miles of city streets and work is nearing completion on 2.15 miles. There remain 7.40 miles of abandoned track still to be removed. Plans were being prepared for the next fiscal year for the removal of approximately 4.70 miles of track. Figure 5 shows the status of the track removal program as of June 30, 1957.

PLANS FOR FUTURE WORK

Plans for a number of street and highway improvements have been completed or are nearing completion and several will be under contract in the next fiscal year. The more important projects are commented upon or listed hereinafter.

Market-Portola Widening

Plans and specifications for the widening and realignment of Portola Drive from Twin Peaks Boulevard to Sloat Boulevard, the final unit of this important gas tax project, were to be ready early next year for submission to the State Division of Highways for approval. Bids were scheduled for October 1957 and it was anticipated that construction would be completed by the beginning of 1959.

Clarendon Avenue Widening

This project consists of developing the present two-lane, unlighted street into a four-lane divided roadway, adequately lighted and channelized to provide for safe access to the subdivisions which are now being developed on both sides of Clarendon Avenue. Part of the work will be financed by the owners of abutting property, under assessment procedures, and the remainder will be paid for by the City from its share of gasoline taxes.

Plans were about 70% complete and it was expected that a call for bids would be issued early in 1958.

Geary Boulevard Widening

Plans for the widening and reconstruction of Geary Boulevard were to be completed in the coming Fall with construction to start in January. The work, estimated to cost $1,775,000, will consist of narrowing the sidewalks from 22 feet to 13 feet; removing the existing car tracks and pavements; constructing a 14-foot wide landscaped median divider with left turn havens at non-signalized intersections; installing traffic signals and a modern lighting system; and constructing new pavement.

In conjunction with this project, the power and telephone companies will replace their overhead lines and supporting poles with an underground distribution system.

Other Improvements Being Planned:

Mansell Street: San Bruno Avenue to McLaren Park	Widen and Pave	$ 594,000
Geary Expressway: Franklin Street to Broderick Street	Widen and Reconstruct	3,565,000
Seventh Street: Townsend Street to Sixteenth Street	Reconstruct	122,000
Chenery Street: Thirtieth Street to Diamond Street	Reconstruct	200,000
Jackson Street: Hyde Street to Steiner Street	Cable Track Removal	175,000
Total Preliminary Estimated Cost		$4,656,000

STREET IMPROVEMENTS FINANCED BY PROPERTY OWNERS

All street construction which was financed in whole or in part by the owners of fronting property, and for which permits were granted or for which public assessment contracts were awarded during the 1956-1957 fiscal year, together with those authorized but not completed in the previous fiscal year, are listed in detail in Appendix I, Tables B-1 and B-2.

PRIVATE CONTRACTS

Table B-1 lists the street improvements which were constructed under private contracts negotiated directly between the property owners and contractors of their own choice. The Department's only function in private contract work is to grant the permit, furnish the plans and specifications, and inspect the work during construction so that the improvements can be accepted by the City for maintenance. Nineteen permits for private contracts aggregating $318,830 were issued during the year.

ASSESSMENT CONTRACTS

Table B-2 lists similar street projects which were done under public contract awarded by the City, the cost being assessed in whole or in part against the property owners benefited by the work. This procedure is in accordance with the Street Improvement Ordinance of 1934, which provides for preparation of plans and specifications, notification of property owners, public hearings, awarding of contract, supervision of construction, and final levy of assessment on the properties benefited. In many cases, City Aid is extended in order to reduce individual assessments to the legal limit which is defined as two and one-half times the lot valuation. The City also contributes funds according to established rules in order to prevent excessive assessments on residential corners, irregular lots and property have disproportionately long frontage. Twenty-four assessment contracts were awarded totaling $168,306.

Table II indicates the volume of work involved in the assessment proceedings for these twenty-four contracts.

TABLE II

Street Work Proceedings Instituted Under

The Street Improvement Ordinance of 1934

Resolutions of Intention passed	17
Street Improvement Projects recommended to the Board of Supervisors	14
Notices of Street Improvement posted	525
Notices of Resolution of Intention Mailed	915
Ordinances ordering performance of street improvements passed	13
Proposals for Street Improvements published	14
Awards of Contract for Street Improvements	14
Notices of Recordation posted	141
Notices of Recordation mailed	294
Private Contracts granted	22
Assessments issued (total amount $182,354.59	20
Bond Payments received (total amount $9,802.38)	124

STREET DEDICATIONS AND CHANGES

The numerous actions taken by the City during the year with reference to subdivisions, street grades, sidewalk widths and street closings were based on investigations and recommendations of the Bureau of Engineering. In many cases they involved preparation of legal property descriptions by the Surveys and Mapping Division.

SUBDIVISION MAPS

The following tentative subdivision maps were received and reported on:

Midtown Terrace Subdivision No. 6, on the northwesterly slopes of Twin Peaks.

Forest Knolls Subdivision No. 1, on the southerly slopes of Mount Sutro.

Marvel Terrace Subdivision, westerly of 32nd Avenue southerly of California Street.

Sherwood Court Subdivision, southerly from the intersection of Dalewood Way and Myra Way.

Amherst Terrace Subdivision, southerly of Felton Street and westerly of University Street

Perego Heights Subdivision, easterly of Burnett Avenue and southerly of Golding Lane.

Subdivision maps approved by the Department of Public Works, adopted by the Board of Supervisors as official maps and filed in the office of the recorder were:

Midtown Terrace Subdivision No. 4, on the westerly slopes of Twin Peaks.

Panorama Terrace Subdivision No. 1, on the southerly slopes of Twin Peaks.

Marvel Terrace Subdivision, westerly of 32nd Avenue and southerly of California Street.

Midtown Terrace Subdivision No. 5, on the westerly slopes of Twin Peaks.

Record of Survey Maps approved by the Department of Public Works, adopted by the Board of Supervisors as official maps and filed in the office of the Recorder were:

Portion of Lot 1, Block 2131-A, Golden Gate Heights, southerly of the intersection of 12th and Cragmont Avenues.

Assessor's Block 2875, westerly of Ulloa Street and southerly of Waithman Way.

Portion of Block 2973-A, Sherwood Forest No. 1, easterly of the intersection of Yerba Buena Avenue and Miraloma Drive.

Assessor's Block 2468, northerly of Wawona Street between 28th and 30th Avenues.

STREET OPENINGS

Maps approved and adopted as official by the Board of Supervisors and recorded, providing for the opening, widening, realignment or extension of streets including streets within new subdivisions were as follows:

Panorama Drive	Olympia Way to Clarendon Avenue	Extension
Starview Way	Olympia Way to Panorama Drive	Extension
Knollview Way	Olympia Way to Panorama Drive	Extension
Gladeview Way	Olympia Way to Panorama Drive	Extension
Skyview Way	Olympic Way to Marview	Extension
Aquavista Way	Skyview Way to Marview Way	Extension
Marview Way	Aquavista Way to Panorama Drive	Opening
Ellsworth Street	Alemany Boulevard to 350 feet southerly to Crescent Avenue	Extension
Alemany Boulevard	At Ellsworth Street	Widening
Oakdale Avenue	Between Griffith and Hawes Streets	Widening

Palou Avenue	Between Griffith and Hawes Streets	Widening
Dormitory Road	Between Jerrold and Kirkwood Avenues	Widening
Sunview Drive	Portola Drive to its easterly termination	Opening
Dawnview Way	From its former easterly termination to Burnett Avenue	Extension
Glenview Drive	From its former easterly termination to Burnett Avenue	Extension
Wawona Street	28th Avenue to 30th Avenue	Widening
Christmas Tree Point Road	Just north of Twin Peaks	Opening
Marvel Court	32nd Avenue to its westerly termination	Opening
Dellbrook Avenue	Olympia Way to Panorama Drive	Extension
Greenview Court	Dellbrook Avenue to its easterly termination	Opening
Harbor Road	Hawes Street to Northridge Road	Opening
Northridge Road	Hawes Street to Fitch Street	Opening
Burnett Avenue	Fenton Lane to Golding Lane	Realignment
Stanley Drive	Between Lake Merced Boulevard and Chumasero Drive	Opening
Olympia Way	Clarendon Avenue to Dellbrook Avenue	Extension

STREETS VACATED

The following streets were vacated between the limits noted:

Charlestown Place	Harrison Street to its northwesterly termination.
Boston Place	First Street to its northeasterly termination.
Somerset Street	Between Mansell and Ordway Streets.
Edna Street	Between Mangels and Joost Avenues.

Fifteenth Street	Between Florida and Alabama Streets
Valmar Terrace	Between Peru Avenue and Madison Street
Twin Peaks Boulevard	Portion at Crown Terrace.
Hayward Street	Harrison Street to its southeasterly termination.
Walbridge Street	Between 464' west of Carter Street to its westerly termination.
Burnett Avenue	Portions between Fenton Lane and Golding Lane.
Market Street	Portion at Romain Street.
Redwood Street	Polk Street to Larkin Street.

An unnamed street in Bayview Park.

STREET GRADE ESTABLISHED (New)

Cambridge Street	Between Burrows and Wayland Streets.

STREET GRADES CHANGED

Official grades were modified on the following streets:

Chilton Street	Between Bosworth and Chenery Streets.
Bacon Street	Between Harvard and Cambridge Streets.

SIDEWALK WIDTH CHANGED

Official sidewalk widths were changed on the following streets:

Market Street	Between Battery and Sansome Streets
Geary Boulevard	Between Masonic and 33rd Avenues.
Bemis Street	Between Roanoke and Miguel Streets
Prague Street	Between Excelsior and Brazil Avenues.

SURVEYS AND MAPPING

The Division of Surveys and Mapping employed six field parties during the past year. However, due to short supply of qualified personnel, the parties were seldom fully manned.

NUMBER OF SURVEYS

A total of 204 separate surveys were undertaken as follows:

Public Improvement Surveys		
Public Assessment and Private Contracts	43	
City Pay Contracts	135	178
Lot and Topographic Surveys		
For City Architect		
Lot	6	
Topographic	4	10
For Recreation-Park Department		
Lot	1	
Topographic	15	16
Total Number of Surveys		204

Survey fees, covering Public Assessment and Private Contracts, received during the year amounted to	$10,950.00

SURVEY MILEAGE

Surveys run are segregated by type of work as follows:
(Project lengths are shown unless noted)

Site and Lot	Boundary lengths	3.15 miles
	Topography	140 acres
	Location new park irrigation systems	195 acres
Cross sections for estimate and design of new street and sewer work		3.80 miles

Line and Grade	Sewers	3.7 miles
	Grading, new street work	1.7 miles
	Curbs and pavement, new street work	1.5 miles
Line and Grade and Cross-section	For reconstruction of existing pavements	3.3 miles
	For reconstruction of existing curbs and gutters	2.4 miles
	For reconstruction of existing pavement and track removal	.8 miles
Examinations	Sewers	4.25 miles
	New street work	3.15 miles
Subsidence		.4 miles
Slide Areas		2.9 miles
Miscellaneous Type Surveys		3.0 miles
Monument Lines		.4 miles
Reference Survey Cuts (miles of lot frontages)		3.2 miles
Reference Survey Monuments		14 each
Repair Survey Monuments		25 each
Total of Surveys	37.65 miles 335 acres 39 each, monument operations	

During the period from September 1956 to July 1957 one survey party was engaged full time on the widening and realignment of Market Street from Hattie Street to Corbett Avenue. Also during the 3-month period from April to July 1957, the construction work on the new communications center on Christmas Tree Point, required nearly all of the time of another survey party.

PRECISE LEVEL SURVEYS

Precise level bench marks established and new elevations determined on existing bench marks, totaled 1,215. To accomplish the latter, 24 miles of precise levels were run.

OFFICE WORK

Maps prepared by the Division of Surveys and Mapping were as follows:

Christmas Tree Point Road	Opening
Burnett Avenue	Realignment
Stanley Drive	Opening
Olympia Way	Extension
Wawona Street	Widening
McLaren Park	Topography
Balboa Park	Topography
Alta Plaza Park	Topography
Silver Terrace Playground	Topography
Golden Gate Park Corporation Yard	Topography
Bernal Playground	Topography
Log Cabin Ranch	Topography
Golden Gate Park - Dog Training Grounds	Irrigation Location
Washington Square	Topography
Russian Hill Park	Boundary Topography
Golden Gate Park - Hall of Flowers Site	Topography
Golden Gate Park - Pitch and Putt Golf Course	Irrigation Location
Lincoln Park Golf Course	Irrigation Location
Hall of Justice Site	Boundary and Topography
Fire House Engine No. 21 Site	Boundary and Topography
Purchaser's Consolidated Shops	Boundary and Topography
Lake Merced Sports Center Site	Topography
Longfellow Elementary School	Boundary and Topography

Six tentative subdivision maps were examined, checked and approved. Four final subdivision maps and four Record of Survey maps, after being checked for lot line dimensions and exterior boundaries, were approved, adopted by the Board of Supervisors and filed in the office of the Recorder.

More than forty-six miscellaneous drawings were prepared in connection with property acquisition and disposition, street openings, widenings and vacations, and easement acquisition and abandonments.

Twenty-seven requests from the City Attorney's Office to determine the City's interest in property involved and to check the boundary descriptions in actions to quiet title were reported on.

Fifteen appeals from decisions of the City Planning Commission were checked to determine whether the signatures represented at least twenty percent of the owners within a radius of 300 feet of the property involved so as to qualify for consideration by the Board of Supervisors.

Fourteen subpoenas for the City Engineer required court testimony of grades, sidewalk widths and distances pertaining to City streets.

One hundred thirty descriptions for deeds to and from the City were checked regarding property under the jurisdiction of the Department of Public Works.

Investigations were made for the approval of thirteen street vacations, four sidewalk width changes, two grade changes and one grade establishment.

STREET AND SIDEWALK INSPECTION

A staff of six Inspectors was employed during the fiscal year 1956-1957 under the direction of an Assistant Engineer on supervision of street excavations, inspection of sidewalks, and reports and investigations in connection therewith. On the average, two Inspectors were engaged continuously on sidewalk inspections.

In addition, special sidewalk and driveway inspections were made in connection with the various track removal and pavement reconstruction contracts, and with the Department's street resurfacing program in widely scattered locations throughout the City. Combining sidewalk inspection with pavement improvements results in securing a completely renovated street from property line to property line. The combined coverage of all sidewalk inspections totalled 36,987 lot frontages.

Efforts were continued to secure needed new sidewalk construction in all districts and as a result of this activity 85,966 square feet of new walks were installed during this fiscal year by the responsible property owners.

Under the 1934 Street Improvement Ordinance assessment procedure 39,865 square feet of sidewalk was installed at various locations in the City where the property owner failed to install the walk after receiving due notice.

Defective Sidewalk Repair Ordinance No. 9046 was enforced. This ordinance provides that the Department of Public Works shall repair defective sidewalks in cases where the owner, upon notification, has failed and neglected to do so. The cost of the repair is an obligation of the owner of the adjacent property and is secured by a lien on the property if the owner does not reimburse the City.

Each step of the notification and repair procedure needs constant attention. The Ordinance was used in 35 cases and in each instance the cost of the repairs was collected.

Funds are provided in the Delinquent Sidewalk Repair Revolving Fund to cover the cost of repairs and the fund is replenished by the monies paid or collected from the property owners.

Various street maintenance inspections and permit investigations were made by four Inspectors, the majority being utility excavations, tank installations, driveways, construction use of street space, pavement defects, house movings, blasting, and miscellaneous complaint and claims investigations. Activities are illustrated by the following summary:

TABLE III

INSPECTIONS, NOTICES, PERMITS AND INVESTIGATIONS

Curb lowering permits and inspections	1,023
Ownership addresses researched	6,023
Preliminary sidewalk repair notices, served	18,755
Formal Notices to construct or repair sidewalks	1,792
Notices to remove obstructions, oil, etc.	1,976
Notices to replace side sewer covers	2,058
Street Space permits and inspections	3,567
Sidewalk tank excavation permits and inspections	159
House moving permits and inspections	38
Defects in pavements reported (written)	2,623
Damaged signs reports	698
Excavation permits approved	12,598
Excavation repaving inspected	4,205
Posting Notices of Improvements	1,444
State Encroachment Permits obtained	61
Asphalt samples for analysis	12
Claims investigations and inspections	565
Special investigations (Permits, Complaints, etc.)	3,813
Correspondence answered	560
Personal and telephone calls of complaints or for information	17,637
Building permit driveway plans, checked	851
Notices of Street Construction	2,685

DAMAGE CLAIMS

The Bureau investigated 180 damage claims which had been filed against the Department of Public Works during the fiscal year 1956 - 1957. The claims arose in general from accidents, usually falls, on streets or sidewalks. They were classified as to cause as follows:

37 due to Contractor's operations
20 due to construction work by utilities
51 due to street conditions
63 occurred on sidewalks
9 occured in bus zones

Of the 180 claims, 124 were falls by pedestrians, of which 103 were females and 21 were males.

28 involved automobile damage or personal injury
24 concerned property damage
4 unclassified

Under the law, damages due to defective pavements or sidewalks are the responsibility of the Department of Public Works, if negligence in making repairs can be shown. A full report on each claim was made for the City Attorney, accompanied by photographs when appropriate.

LANDSLIDE CORRECTION

GENERAL

The annual rainfall in San Francisco, as recorded by the Federal Weather Bureau from July 1, 1956 to June 30, 1957 amounted to 15.04 inches. This figure is about 33% less than the yearly average of 20.51 inches. It is also 44% less than the total for the 1955 - 56 season when several heavy concentrations of rainfall caused numerous slides, several of considerable magnitude. Due to the subnormal 1956 - 57 rainfall relatively few slides occurred throughout the City.

All reported slides whether on private or public property were investigated. As usual, many of those on private property were of the type resulting from the removal of lateral support by adjoining property owners and were the responsibility of the owners.

As in the past, the Bureau of Sewer Repair measured the flows from the drains constructed in slide areas and furnished weekly reports. These flows were analyzed to determine the effectiveness of the drainage systems and the need for additional work. In addition, surveys were made periodically at many of the slides to check their stability and determine the rate of movement, if any.

Comments on the slides which received attention during the year are as follows:

El Camino Del Mar Slides

The easterly slide has continued to move at a rate of about 1/2 inch per month during periods of no rain to 2-1/2 inches per month after rains. At the end of the fiscal year, test borings were in progress to determine the depth to sound rock capable of supporting the abutments for a proposed bridge to span the slide.

Only slight movement was recorded at the westerly slide. Any necessary stabilization work will be done when the east slide bridge is built.

Bret Harte School Slide

Two new drainage systems were constructed in the fall and winter, one in Ingerson Avenue and one in the School yard. No further movements were noted after the drains were installed.

Parker Avenue Slide

Movements in the slide area have continued but at a nominal rate. At the end of the fiscal year, an investigation was under way to determine the improvements to the existing drainage system that will be required to accelerate removal of water from the slide material, and to completely stop the earth movement.

Grand View Avenue Slide (formerly Burnham Street)

The existing drainage system was improved and extended to the south during the fall and winter. No appreciable movement has since occurred.

Bache Street Slide

A contract for removal of the slide material and construction of a corrugated metal drain north of the Alemany Housing Project was awarded in September.

It was considered inadvisable to construct the needed bin-wall at the south end of the improved section of Bache Street during the winter and this was deferred but the plans and specifications were completed.

Twin Peaks Boulevard Slide

This slide occurred during the heavy rains of 1955-1956. Previously during grading operations for Midtown Terrace No. 2 Subdivision, immediately adjacent to the Boulevard right of way, by the owner, loose fill was placed on top of the slopes to the north of the Boulevard just south of Panorama Drive. This affected the stability of the slope. Movement took place both in the Boulevard right of way and in the subdivision.

Arrangements for test borings were completed with a view to effective stabilization measures paid for jointly by the City and subdivision owner.

Farmers Market

When the area for the Market was graded in 1950, the ground on the northwesterly side was cut to a 1:1 slope.

Storm and ground water drainage accumulated at the bottom of the slope causing a soft area unsuitable for paving and materials eroded from the slope by the rain and seeping ground water accumulated at the toe. In order to lower the ground water and stabilize the area a gravel drain was built at the toe of the slope. It is 5 feet deep and of V.C.P. perforated in the bottom and supported on a concrete pad. The drain delivered about 60 gallons per hour and dried out the slope.

Union Street Slide at Sansome Street

During the winter large quantities of residual clay were eroded from the steep unimproved slopes of Union Street and deposited in Sansome Street, and large boulders and fractured rocks were exposed. It was necessary to remove the loose rock which was hazardous to pedestrians and traffic in Sansome Street.

An emergency was declared and all dangerous rocks and boulders were removed under "Force Account" at a cost of about $2,700.

Foerster Street Slide

During the year, only one new stabilization problem developed. This was on Foerster Street between Dorcas Way and Gatun Alley.

When Foerster Street was being graded it was noticed that the subgrade became soft and the Contractor could not operate his equipment in the area. This was due to ground water perched on sloping rock about 10 feet below the proposed street grade. The water was seeping from the cut slope and also below the street, thus softening the subgrade, and threatening a street slide.

A 3 foot deep gravel drain was built by the street contractor but was ineffective. Test borings were therefore made and revealed the ground water conditions.

Two trenches were then dug along the curb line with drain tile at the bottom, the trenches being filled with gravel, and the drains terminating in a sewer manhole. The test holes were connected to the drains by means of 2" W.I. pipes extending from the bottom of the test holes up to the level of the bottom of the drain and then across to connect to the drain. The bottom of the test holes were then filled with gravel and the hole plugged with clay so that the top of the plug was at the same elevation as the bottom elevation of the adjacent drain. The remainder of the test hole was filled with earth. The drainage system dried up the roadway and the street improvement was successfully completed.

TRAFFIC ENGINEERING

ADMINISTRATION

A move toward improvement in traffic administration was made when the report by the Automotive Safety Foundation was issued. This report was previously discussed herein under "Highlights of the Past Year".

TRAFFIC PLANNING

As in recent years, traffic planning is now a major function of the Division. Below is a partial list of projects exclusive of parking for which studies and reports were made or advice concerning traffic aspects of design was given.

Various Subdivision Layouts
Clarendon Avenue Widening
Clay-Washington Freeway Ramps
Central Skyway Ramps
Redevelopment Area "E"
Geary Expressway Design
Stanley Drive Access Roads
Geary Boulevard Widening

In regard to Geary Boulevard, entirely new concepts, for San Francisco, were developed concerning traffic movement and community development. The imminent widening and removal of streetcar tracks from the Boulevard and the proposed Geary Expressway east of Divisadero Street necessitated development of new traffic control measures for this trafficway. Taking account of the Richmond District as a whole, it was felt that Geary Boulevard was not serving its proper function as a major traffic artery and that too many vehicles were using parallel side streets, such as Anza, Cabrillo, Clement, etc. This was due to the presence of streetcars, and the roughness of the roadway surface, poor traffic control and the presence of angle parking on Geary Boulevard. The problem was how to improve the traffic functions of Geary Boulevard and still retain the desirable business features that have made it a major neighborhood shopping center of San Francisco.

A plan was developed that featured the following points:

1. Geary Boulevard would be widened by narrowing the sidewalks and a 14-foot center island would be installed. This would provide for left-turn lanes at specified locations, center island planting, pedestrian refuge at unsignalized locations and center island safety lighting.

2. Signals would be installed at approximately one-half the intersections. Left-turns would be prohibited at the signalized intersections and allowed at the non-signalized intersections and the signals would be interconnected in a progressive signal system. Left-turns would then take place at locations where time space relationships indicated that they would be safest.

3. Unsignalized cross streets would be cut off to through movement on Geary Boulevard, allowing only right turns. This would be in accord with the principle of restricting traffic to fewer streets and thus providing a better neighborhood free of excessive and dispersed traffic movements. Pedestrians crossing Geary Boulevard at unsignalized intersections would not have trouble because traffic proceeding along the street would be in definite channelized platoons and pedestrians could find a refuge on the 14-foot center island in the center of the street.

4. Angle parking would be eliminated on Geary Boulevard, but the lost stalls would be compensated for by cutting back sidewalks on the side streets and installing angle parking there. This change would provide the merchants with more street parking stalls than they previously had and it would also remove a major source of accidents and traffic congestion from Geary Boulevard, namely, the angle parking.

This development by improving traffic movement on Geary Boulevard would decrease traffic on parallel residential streets, and would retain desirable commercial features while restricting cross traffic to a few important streets and reducing excessive traffic movements on residential cross streets.

Unfortunately, public opposition to the elimination of angle parking on Geary Boulevard and to the closing off of cross streets prevailed. The other physical features of the plan, however, will be instituted and in the future the necessity for the entire plan may be recognized.

PARKING

A considerable amount of work was done on parking problems within the last year. Reports were completed for the Parking Authority on the following projects:

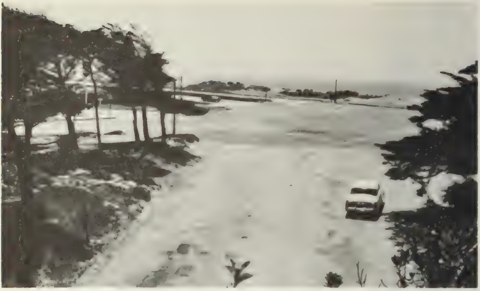
Portola District Parking
Portsmouth Square Parking
Fringe parking at Seventh and Harrison Streets
Miraloma District Parking
Report of Mechanical Garages
Updating Downtown Parking Program

In addition, advice and consultation were given on the Dewey Boulevard parking lot, Ocean Avenue parking lots, Sutter-Stockton Garage, Civic Center Garage, and the Fifth and Mission Garage.

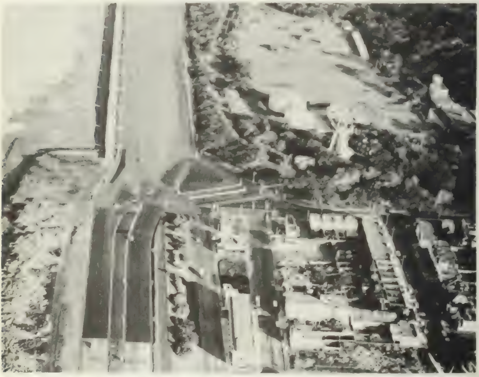
An important and time-consuming function of the Division in regard to parking was work in connection with the new one-for-one parking ordinance adopted by the Board of Supervisors. This ordinance designates the City Planning Department as the enforcing agency. That Department Requested the City Engineer to advise on the adequacy of parking layouts proposed by builders for homes, apartments and motels. Standards in regard to stall widths, aisles, turning radii, exit and entrance dimensions and a whole host of other factors connected with the parking and unparking of a vehicle were therefore developed by a cut and try process. New situations continually presented new problems requiring modification of the standards. It became evident early that the ideal standards in the parking manuals are too strict for enforcement and they had to be relaxed to some extent. However, a workable set of requirements was developed and the checking of parking plans may soon be a routine matter.

TRAFFIC SIGNS

The past fiscal year has seen a number of interesting innovations in the traffic sign field in San Francisco. The first overhead sign on city streets was put up on Third Street south of Ingerson Avenue by the State Division of Highways to reduce the high accident rate at the intersection of Third Street and Jamestown Avenue. Special



LINCOLN WAY AND GREAT HIGHWAY
Before Channelization, Signals and Lighting



LINCOLN WAY AND GREAT HIGHWAY
After Channelization, Signals and Lighting

Courtesy
San Francisco Examiner

temporary routing signs on chartreuse paper were developed to give directions to the Republican National Convention at the Cow Palace. Also to be noted were the new neon signs restricting left turns in the peak hours at Fremont and Market Streets, Ocean Avenue and Alemany Boulevard and a neon left turn control sign at South Van Ness Avenue and Mission Street.

The change of law by the Board of Supervisors leaving Sundays as the only days when parking restrictions are not enforced, necessitated a large scale program of sign changes by the City. The wording "Saturdays and Holidays" had to be removed from approximately 6,466 signs. The problem was studied and it was decided that rather than replace the signs, the words "Saturdays and Holidays" should be covered with a white opaque tape with the trade name "Scotchcal". The tape has worked very well and there have been no complaints regarding its use.

TRAFFIC SIGNALS AND CHANNELIZATION

Three major and five minor traffic signal and channelization projects totaling approximately $318,000 went to contract during the year.

In addition, a $110,000 contract for channelization and signalization of Great Highway and Lincoln Way, which was let at the end of the previous year was completed.

The largest of the contracts, the $155,800 Post - O'Farrell Signal Contract, provided for the installation of modern three-light signals on Post Street and O'Farrell Street, two important one-way arteries between Presidio Avenue and Grant Avenue. In addition, this contract also provides for removing practically all of the remaining Wiley signals in the north of Market area.

The $87,528 South of Market Signal Contract No. 2 provided for the replacement of the rest of the Wiley signals in the South of Market area between Third Street and The Embarcadero with modern three-dial fixed time signals. In addition, some previously unsignalized high accident locations in this area also had signal control extended to them.

The Fifteenth Isolated Signal Contract costing $60,889 provided for the replacement of some of the antiquated Wiley signals, installation of three-light signals at various intersections including high accident locations, and the installation of channelization and pedestrian barricades at points throughout the City.

TABLE IV
TRAFFIC FACILITIES AND IMPROVEMENTS

	Completed 1956-1957	Approximate Cost 1956-1957	Number In Place 6-30-57
TRAFFIC SIGNS			
Parking Signs Installed	238		
Parking Signs Repaired or Changed	472		
Parking Signs Removed	29		
Other Signs Installed	382		
Other Signs Repaired or Changed	513		
Other Signs Removed	22		
Stop Signs Installed	61		
Stop Signs Repaired or Changed	260		
Stop Signs Removed	2		
Total	1,979	$37,200.00	18,000 est.
STREET NAME SIGNS			
Street Signs Installed	102		
Street Signs Repaired or Changed	957		
Total	1,059	$24,500.00	7,500 est.
PARKING METERS			
New Installations	77	$ 2,700.00	12,650
Maintenance Changes *	549		
Relocations	78	850.00	
Total Cost		$ 3,550.00	
TRAFFIC PAVEMENT PAINTING			
Standard Striping, miles	360.6	$37,188.65	
12-inch Stripes, miles	132.4	86,856.52	
Pavement Words (cost incl. in other items)	10,319		
Bus Zones (Units)	1,893	15,100.98	
Parking Stalls (Units - all types)	9,026	7,561.69	
Total Cost		$146,707.84	
New School Intersections	7		763

* This item does not include all of the normal maintenance performed by the Department of Electricity. The 549 changes shown are actual changes ordered by the Police Department and the Traffic Division, and are as follows:

270 Removals; 55 Relocations; and 224 Installations.

TABLE IV - Continued

	Completed 1956-1957	Approximate Cost 1956-1957	Number In Place 6-30-57
SIGNALIZED INTERSECTIONS			
Wiley Type Signals Replaced	2		
3-Light Installations	15		
Net Increase	13		560
Wiley Type Signals Existing			53
Total Signals			613
Equipped with Pedestrian Signals	3		145
Actuated Signals Added	3		143
CHANNELIZED INTERSECTIONS			
Concrete Islands			8
Raised Pavement Bars			None
Total			8
DIVIDED ROADWAYS			
Concrete Center Islands, miles	0.38		45.68

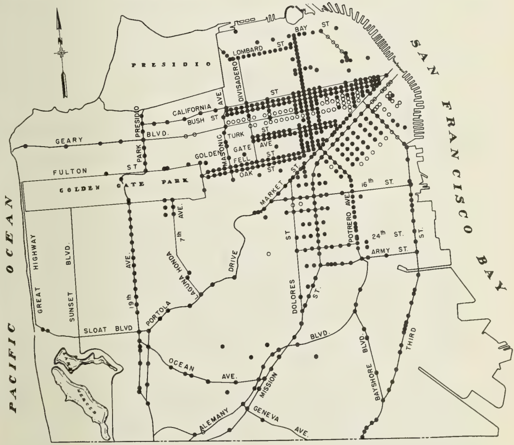


FIG. 6
3-LIGHT TRAFFIC SIGNAL INSTALLATIONS

SEWERAGE SYSTEM

GENERAL

Planning, design, and construction of necessary replacements and extensions of storm and sanitary sewer systems, collecting sewers including pumping stations, and improvements at the three sewage treatment plants progressed under the sewer bonds program.

FUNDS

Sewer and Pumping Station contracts awarded during the year and sewer work included in major street reconstruction contracts, exclusive of assessment projects, were as follows:

Sewer Replacements and Extensions	$ 470,905
Sewers in Street Reconstruction and Widenings, Track Removal and Civic Improvement Contracts	283,800
Collecting Sewers and Pumping Stations	637,581
Total	$1,392,286

The balances remaining in the various Sewer Bond issues at the close of the fiscal year were:

	Bond Issue	Approximate Balances
1944 Sewer Bonds	$12,000,000	$1,100,000*
1948 Sewage Treatment Bonds	15,000,000	520,000
1954 Sewer Bonds	12,645,000	9,400,000

* The balance of $746,000 reported in the previous Annual Report (1955-56) was in error.

STORM AND SANITARY SEWER SYSTEM CONSTRUCTION

A number of combined storm and sanitary sewer projects were constructed to relieve flooding, extend the sewer system, make emergency replacements caused by breaks, and relocate or improve the sewer system in connection with street widenings and civic improvements. Generally these sewers were constructed parallel to the existing sewers to serve as auxiliary sewers and to supplement existing sewers which are inadequate but in good condition.

Some of the more necessary and important projects constructed are briefly described below:

Lake Street Sewer System Section "D"

Contract Cost $117,985

This sewer is a combined sewer in Arguello Boulevard, from McAllister Street to Geary Boulevard, constructed to relieve flooding along Arguello Boulevard. It constitutes the completion of the "Lake Street Sewer System" constructed in recent years in Arguello Boulevard, Cornwall Street, 8th Avenue, Lake Street, 17th Avenue and through the Presidio to the Ocean.

It consisted of 2,030 linear feet spun reinforced concrete pipe varying from 27" to 54" in diameter and 110 linear feet of 21" V.C.P. Sewer.

Bell and spigot pipe joints were used for the first time for concrete pipe from 27" up to 42" in diameter.

Anza-Geary Sewer Section "A"

Contract Cost $42,408

This auxiliary sewer, constructed in 14th Avenue from California Street to Lake Street, consisted of 620 feet of 54" diameter spun reinforced concrete pipe and two junction structures.

The purpose of this sewer is to prevent flooding in 14th Avenue, south of Geary Boulevard. The remainder of the "Anza-Geary Sewer" will be constructed in conjunction with Geary Boulevard Sewers - Contract #1 described hereinbelow.

Geary Boulevard Sewers - Contract #1

Contract Cost $237,772

This project includes all sewer work necessary in Geary Boulevard between 14th Avenue and Presidio Avenue prior to the forthcoming widening of Geary Boulevard. It consists mainly of auxiliary sewers in Geary Boulevard from 14th Avenue to 5th Avenue and in 5th Avenue from Geary Boulevard to Anza Street and is designed to prevent flooding in Geary Boulevard and in Anza Street, particularly in the vicinity of 5th Avenue. This unit, along with the above-described "Section A", completes the Anza-Geary Auxiliary Sewer System. Small sewers were also replaced with larger sewers in Geary Boulevard near Presidio Avenue and in 2nd Avenue near Cornwall Street.

Project included 65 linear feet of 3'0" x 4'6" egg-shaped and 6'00" circular monolithic reinforced concrete sewers, 2,930 linear feet of spun reinforced concrete pipe sewers varying from 27" diameter to 72" diameter, 820 linear feet of vitrified clay pipe sewers, one (1) overflow structure, and five (5) junction structures. Car tracks in Geary Boulevard were removed as necessary to construct the sewers.

Barneveld Sewer: Oakdale Avenue to McKinnon Avenue
Contract Cost $19,100

This was an auxiliary sewer consisting of 650 linear feet of vitrified clay pipe ranging in size from 18" to 27" in diameter.

Recent development on McKinnon Avenue east of Barneveld Avenue which drains into Barneveld Avenue Sewer necessitated additional capacity for the existing sewer in Barneveld Avenue.

Foerster Street Sewer: Teresita Boulevard northward to Los Palmos Drive
Contract Cost $37,780

Due to cave-in in Foerster Street below Los Palmos Drive, caused by a failure of the existing sewer, as well as a record of four previous breaks in the sewer in this block, we let an emergency contract for the replacement of the existing 21" V.C.P. The need for a new sewer was urgent, as in addition there have been landslides and sub-surface water problems in this block.

600 linear feet of 27" diameter V.C.P. sewer encased in reinforced concrete, including a permanent 6" diameter pipe drain embedded in crushed rock under the sewer, were constructed.

Guniting of McAllister Street Sewer

The program of repair of old 3' x 5' brick sewers by placing a 3/4" gunite lining was continued.

Two contracts were awarded as follows for guniting the McAllister Street sewer:

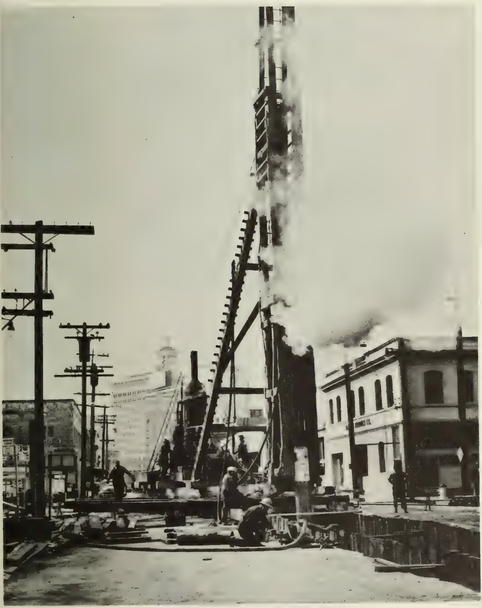
Buchanan Street to Laguna Street - $7,085 or $1.30 per sq. ft.
Laguna Street to Webster Street - $8,750 or $1.40 per sq. ft.

Sewers in Street Projects

The following sewer work was done in conjunction with street reconstruction, widening, track removal, and civic improvement project contracts:

Market Street widening: Hattie to Corbett Avenue	$121,900
Lake Street reconstruction: 6th Avenue to 28th Avenue	36,400
Washington Street Track Removal: Hyde to Steiner	27,400
Christmas Tree Point Radio Center	16,000
Woodward Street reconstruction: 14th to Duboce	7,700
Columbus Avenue and North Point Street track removal	14,400
Civic Center Exhibit Hall Sewers	60,000
TOTAL	$283,800

The sewers in the Market Street widening contract included 4,800 linear feet of main sewer and culverts ranging from 8" to 18" in diameter.



DRUMM STREET SEWER

At Jackson Street

COLLECTING SEWER CONSTRUCTION

North Point Collecting Sewers, Section B-1
Contract Cost $178,400

A contract was awarded for the North Point Collecting Sewers, Section B-1, consisting of constructing a large diversion structure (a combined weir and gate structure) near the foot of the Howard Street Outfall, and 1,240 feet of intercepting sewer (21" diameter, encased pipe on piles) in Steuart Street from Howard Street to Market Street. This contract is one of several that will provide the facilities for the collection of sewage in the low lying areas of the North Point Sewage District that cannot be collected by gravity to the North Point Sewage Treatment Plant. The 21" sewer will connect with the proposed Drumm Street Sewage Pumping Station which is in the final design stage, and through this pumping station, all sewage contributing to the Howard Street Outfall. Approximate present average quantity - 1.1 MGD will reach the North Point Main in Sansome Street and thence to the North Point Sewage Treatment Plant.

North Point Collecting Sewers, Section B-2
Contract Cost $459,181

Another contract was awarded under the North Point Collecting Sewers, designated as Section B-2, consisting of the construction of a large diversion structure (a combined weir and gate structure) near the foot of Jackson Street, 1,640 feet of intercepting sewer (21" diameter encased pipe on piles) in The Embarcadero from Jackson Street to Market Street, and another 1,400 feet of miscellaneous combined sewers along several streets in the vicinity. The collection facilities will also connect with the proposed Drumm Street Sewage Pumping Station, as in the case of collecting flows from the Howard Street Outfall mentioned in Section B-1 above, and the sewage approximate present average quantity - 1.9 MGD will then be conveyed to the North Point Sewage Treatment Plant via the North Point Main.

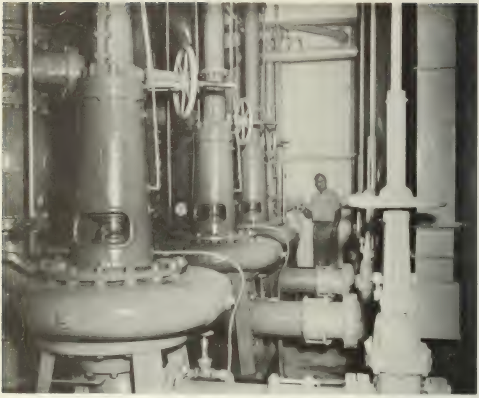
A major portion of this project involves the replacement of undersized pipe sewers or the replacement of presently unsuitable brick or wooden sewers.

Southeast Collecting Sewers, Section I-1

Construction of the Candlestick Point Sewer Tunnel began in 1955 and was completed at the end of this fiscal year. The tunnel is about 3,850 feet long and runs under the Candlestick Point Hill. Upon completion of the intercepting facilities south of Candlestick Hill, the tunnel will carry sewage from the Sunnydale Avenue Outfall to the Ingalls Street Interceptor for delivery to the Yosemite Sewage Pumping Station and eventually to the Southeast Sewage Treatment Plant.

YOSEMITE DIVERSION STRUCTURE
Setting Tide Gates

YOSEMITE OUTFALL SEWER
AND PUMPING STATION



YOSEMITE PUMPING STATION
Pump Room

Southeast Collecting Sewers, Sections G-1, 2 and 3
Contract Cost $335,440

Contract for the construction of the Yosemite Sewage Pumping Station continued through the year and is now close to completion. The Pumping Station will have a maximum capacity of 13 MGD and will constitute the major pumping facility for the Yosemite Cove, the Candlestick Cove, and in the future, the South Basin Tidelands area.

SEWAGE TREATMENT PLANTS ADDITIONS AND BETTERMENTS CONSTRUCTION AND REPAIRS

Contracts totaling $123,011 were awarded during the year for Additions and Betterments and repairs to the Richmond-Sunset, Southeast and North Point Sewage Treatment Plants. These projects were:

Project	Contract Amount
NORTH POINT	
Replacement of Ventilation Ducts	$14,047
The purpose of this project was to replace the existing aluminum ductwork in the Pre-Treatment and Grit Removal Buildings and the steel fan housings in the Sedimentation Building which had deteriorated badly due to the very humid atmosphere having a high chlorine content. Many materials were considered for the replacement. Some had superior corrosion-resisting qualities, but presented insurmountable fabrication difficulties. The material chosen for the ductwork was A.I.S.I.-316 stainless steel alloy sheet which is both highly corrosion resistant and is suitable for fabrication into ductwork. The fan housings were specified to be sheet steel with a 10 mil corrosion-resistant vinyl coating. This requirement presented the greatest difficulty during construction, as experience has shown that it is difficult to produce a high-grade industrial coating conforming to rigid specification. In this case, careful inspection using an Elcometer paint thickness indicator, together with close attention by the Contractor produced an installation which is expected to greatly surpass the service life of the original installation.	
Crane Service Platform and Stairs	2,782
Modifying Existing Scum Troughs	5,221
Stand-by Sand Pumps	14,159
Concrete Block Walls - Pre-Aeration and Sedimentation Buildings	1,865
Consisted of replacing the walls in the Fan Rooms of the Pre-Aeration and Sedimentation Buildings that have deteriorated beyond repair with permanent concrete block walls.	
Pipe Railings	9,027
This work consisted of galvanizing approximately 40,000 linear feet of pipe railings from the Pre-Aeration and Sedimentation Buildings.	

	Contract Amount
SOUTHEAST	
Paving and Lawn Sprinkling System	53,594
Work consisted of installing lawn sprinklers and the construction of pavements in various areas.	
Repairing and Painting Water Storage Tank and Tower	5,210
Work consisted of rehabilitating the water storage tank and tower. The process included cleaning all surfaces of rust and scale; replacing all nuts and bolts showing excessive corrosion; tightening the sway rods to distribute the load as originally designed; painting the exterior surfaces of the tank and tower; and lining the interior of the tank with cementatious material.	
RICHMOND-SUNSET	
Influent Channel Gates and Effluent By-Pass Sewer	11,450
Work consisted of construction of two 3' x 5' slide gate structures in the influent channels leading to the Pre-Treatment Building so as to provide a better means of flow control to the Plant and also of constructing about 90 feet of 3-foot diameter pipe sewer to supplement the inadequate capacity of the originally constructed effluent by-pass sewer.	
Window Replacement	5,656
The work consisted of replacing the windows in the Pre-Treatment Building that have deteriorated beyond repair.	

PLANNING

Storm and Sanitary Sewers

Planning continued on the preparation of plans for storm sewers to prevent flooding and to serve new areas and tideland, and for sewers in conjunction with street projects. Several projects are now being prepared for contracts. These projects together with their estimates of costs are:

Portola Widening Sewers Sewer replacements and enlargements required in conjunction with street widening and realignment.	$200,000
Larkin Street Sewer: Post to O'Farrell Street Replacement of previously broken sewer and enlargement to prevent flooding.	80,000
Clarendon Avenue Sewers, Second Contract Sewers needed for future street widening and to serve several adjacent new subdivisions.	70,000
Geary Boulevard Sewers: Contract No. 2 This project is necessary to complete all sewer work between 16th Avenue and 23rd Avenue before the street widening and reconstruction is undertaken, as well as provide certain needed additional sewer capacity.	145,000
Griffith Street Outfall An outfall sewer is being planned in Griffith Street from Shafter Avenue to the South Basin Canal to permit completion of filling of tidelands and industrial development in this vicinity.	240,000

Collecting Sewers

Although progress continued on the design of the North Point and Southeast Sewage Collecting Systems under the program for the cleaning up of Bay waters in conformity with State requirements, this phase of the work was somewhat delayed. The Jackson-Commercial Streets District Sewer, Section B-3 estimated to cost $600,000 and the Southeast Collecting Sewers: Rankin Street outlet and intercepting sewer, estimated to cost $100,000, were delayed to permit the completion of more urgent projects. The contract, plans and specifications for the Southeast Collecting Sewers; Sunnydale Diversion Structure (H-1); Candlestick Diversion Structure (H-2); Candlestick Intercepting Sewers (H-3); all estimated to cost $350,000 were completed but the taking of bids postponed due to the lack of right-of-way. It is hoped, however, that these projects will be placed under construction sometime during the next fiscal year.

The construction of the Southeast Collecting Sewer System Section H, will complete the major units of the Southeast Sewer System whereby the sanitary flow from all major outfalls in this district will be diverted to the Southeast Sewage Treatment Plant leaving only isolated, relatively small discharges remaining to be collected.

Sewage Treatment Plants - Additions and Betterments

Plans were under preparation for further additions and betterments and repairs at the three sewage treatment plants and projects estimated to cost some $200,000, are expected to be advertised during the next fiscal year.

Miscellaneous

Sewer plans were reviewed and approved for subdivisions, housing projects, freeways (Central and Southern) Urban redevelopment projects (Diamond Heights), schools and for several public and private buildings.

The Bureau also continued the work started last year in connection with the preparation of maps, together with the necessary field surveys, locating the industries throughout the City in cooperation with the Bureau of Sewer Repair and Sewage Treatment in connection with the enforcement of the industrial waste provisions of Ordinance Numbers 7988 and 7425, which are administered by the Department. Various engineering studies of types of separators and other devices for which standards are to be developed were also continued in conjunction with this program.

LABORATORY AND TESTING

The testing laboratory was operated as a unit of the Construction Division to check the quality of materials used in construction projects and to control and test asphalt and concrete mixes used in pavements and structures. In addition many tests and checks were made for the Purchaser of Supplies, the Bureau of Architecture, the Public Utilities Commission, the Fire Department and the Recreation and Park Department. These included many visual analyses and suggestions.

CONCRETE

Results of compression tests conducted on samples of concrete, taken at job site at time concrete was being placed, tested above specifications. Samples of concrete are taken by Inspectors on job and allowed to set for twenty-four hours before being transported to the laboratory. In some cases, there being no suitable facilities for storing samples, the concrete specimens are transported to the laboratory as soon as possible.

ASPHALT

The quality and surfaces of asphalt pavements have continued to improve due to use of a more suitable blend of sand and fine aggregate with the addition of crushed rock.

Asphalt of 50-60 penetration has been used as often as possible to accelerate the setting of pavement surfaces. In some cases the use of 50-60 penetration asphalt and crushed materials permitted traffic to cross over freshly laid surfaces with no serious damage to the finish of the pavement.

Asphalt refiners have recently discontinued the manufacture of 50-60 penetration asphalt. In the future the use of 40-50 penetration asphalt will be used during warmer weather in pavements subject to heavy traffic which can not be diverted. 70-80 penetration asphalt will be used in pavements not subjected to heavy traffic or which must be laid during cold weather.

Several checks of asphalt mixes and materials, produced and used by the Department of Public Works Asphalt Plant, showed very consistent textures, asphalt content, grading and quality. The results were improved since the installation of a number six slotted sieve which allowed better control of the sand content of mixes.

SUMMARY OF TESTS PERFORMED

A summary of the tests performed in the laboratory during the year for the various departments, together with corresponding figures for the preceding year, are shown in the following table.

TABLE V

	1955-1956		1956-1957	
CHEMICAL AND PHYSICAL TESTS				
Public Utilities Commission	15		15	
Department of Public Works	125		60	
Purchaser of Supplies	175		140	
San Francisco Fire Department	20		15	
Recreation and Park Department	15		20	
Bureau of Architecture	150		150	
Bureau of Engineering	20	520	15	415
PAINT TESTS				
Recreation and Park Department	0		0	
Purchaser of Supplies	25		12	
Bureau of Architecture	20		20	
Public Utilities Commission	2		5	
Bureau of Engineering	0	47	2	39
ASPHALT AND COAL TAR TESTS				
Corporation Trenches	2		4	
Public Utilities Commission	5		20	
Recreation and Park Department	5		2	
Department of Public Works	100		70	
Bureau of Engineering	75	187	40	136
CONCRETE				
Recreation and Park Department	4		8	
Bureau of Architecture	280		535	
Public Utilities Commission	56		160	
Bureau of Engineering	225	565	412	1,115
TOTAL		1,319		1,705

GARBAGE DISPOSAL

Garbage and refuse collected in San Francisco by the two licensed scavenger companies are disposed of by the Sanitary Fill Co., a corporation vested with an exclusive franchise from the City. Under the terms of this franchise, the City Engineer maintains constant inspection and determines the engineering practices employed in the operation of the disposal site.

SANITARY LAND FILL

The disposal site is located on Southern Pacific Railroad property in San Mateo County just south of the San Francisco City and County Line in the San Francisco Bay Tidelands as shown on Fig. 7.

The method of disposal is essentially a daily garbage fill with an earth cover creating separate cells within the fill. Sandy clay, which forms an excellent seal around the garbage, is available at the new quarry located in Candlestick Hill and the nearly depleted original quarry south of the San Francisco County Line supplies rock necessary for wet weather operations.

Through diligent operation and constant inspection during the year, pools of stagnant water have been eliminated, the site has been maintained in a clean condition. The slight odor during active dumping is dispersed by the prevailing westerly offshore winds. Several spontaneously ignited underground fires, which are inherent in this type of operation were readily controlled as the cellular construction of the fill kept them confined to a single cell.

The burning of combustible materials, i.e., unsalvageable waste pipe, boxes, etc., and small quantities of quarantined garbage will ultimately be eliminated due to the impending ban on open burning by the Air Polution Control District. It is planned that the combustible material and steam-cooked quarantined garbage will be incorporated within the fill.

SETTLEMENT OF THE FILL

The combined settlement of the garbage fill and the underlying Bay mud generally allows for three separate fills each approximately 20 to 25 feet thick, one on top of the other. The first of these fills and approximately 75% of the second fill and 50% of the third fill are completed in the area north of the Freeway access road.

A large amount of the completed third fill is presently occupied by various light industries.

The program of determining settlement rates of the various fill layers as described in the 1955-1956 Report was continued.

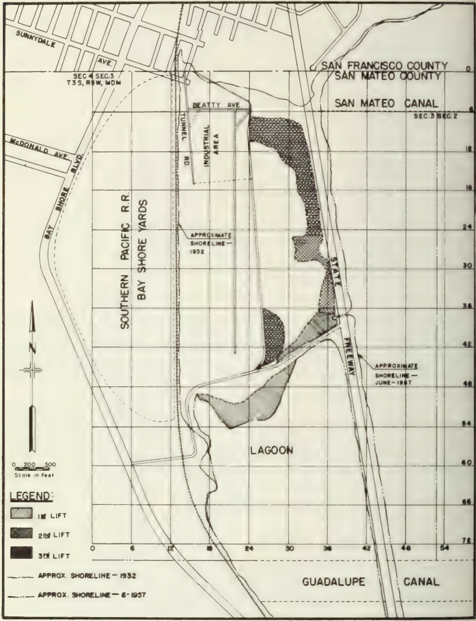


FIG. 7
GARBAGE DISPOSAL SITE
Shaded Areas Indicate Activity During Fiscal Year 1956-1957

TABLE VI

GARBAGE COLLECTION AND DISPOSAL STATISTICS

Calendar Years 1955 and 1956

	1955	1956
GARBAGE COLLECTION		
Trucks used, average	148	164
Trips per day	268	267
PAPER COLLECTION		
Flat-bed trucks used	29	29
Amount collected, tons	24,045	Not available
Amount salvaged, tons	19,463	Not available
Amount dumped, tons	4,582	5,580
INCOME OF SANITARY FILL CO.	$276,660.73	$296,578.10
FILL AND COVER EXPENSE		
Operations	$214,707.70	$220,756.96
Road Maintenance	9,988.43	10,578.67
Administration, Inspection and Legal	52,414.54	56,360.00
Total Expense	$277,110.67	$287,695.52
GARBAGE AND REFUSE HANDLED		
City of San Francisco tons	255,338.88	255,120.55
Other sources, tons	3,885.32	2,773.45
Total Tons	259,224.20	257,890.00
Quantity per day, tons (312 days)	831	828
Cost of disposal per ton	$1.069	$1.116
COVER MATERIAL		
Quantity used, cu.yd.	215,480	217,000
Total Cost	$124,438.20	$126,945.00
Cost per cu.yd.	$0.576	$0.584
Cover per ton of garbage and refuse, cu.yds.	0.832	0.842
Total truckloads of garbage and refuse	83,322	83,041
Average weight per load, tons	3.11	3.105
Estimated average weight of garbage per cu.yd., pounds	346	344

NOTE· This table is compiled from information obtained from Easley & Brassy.

SUMMARY:

The benefits of the sanitary land fill operation are multifold. The method is a sanitary one of disposal, economical and profitable to all parties concerned, and results in valuable industrial property reclamation from the Tidelands.

ADMINISTRATION OF THE BUREAU

ORGANIZATION

The plan of organization of the Bureau as of June 30, 1957, is shown on the chart at the beginning of the report of this Bureau. It will be noted that there are two staff divisions and five line divisions under the direction of the City Engineer who heads the Bureau and reports to the Director of the Department. The Assistant City Engineer assists in general supervision and also acts as Head of the Division of Streets and Highways.

The persons who were in charge of each division, section and unit as of June 30, 1957, are shown in the following tabulation.

SUPERVISORY PERSONNEL
As of June 30, 1957

DIVISION, SECTION AND UNIT	PERSON IN CHARGE
DIVISION OF STREETS AND HIGHWAYS	C.J. Geertz, Asst. City Engr.
Street Improvement Section	E.J. Sierra, Engineer
Highway Section	W.C. Ewing, Engineer
Track Removal Section	A. Goldberg, Engineer
DIVISION OF DESIGN	R.C. Levy, Senior Engineer
Administrative Section	G. Galli, Engineer
Structural Investigation Section	N.F. Yde, Engineer
Structural Design Section	R.G. Lee, Engineer
Sewer Section	R.F. Lauenstein, Engineer
Sanitary and Special Projects	A.O. Friedland, Engineer
Mechanical Section	D. Matlock, Engineer
Electrical Section	A.E. Tanner, Engineer
Hydraulics Section	G.T. Jeong, Engineer
Specifications and Estimates	S.C. Gerughty, Engineer

SUPERVISORY PERSONNEL - Continued

DIVISION OF TRAFFIC ENGINEERING	R.T. Shoaf, Engineer
SURVEYS AND MAPPING SECTION	H.G. Louie, Engineer
CONSTRUCTION DIVISION	J.D. Roberts, Senior Engineer
CONTRACT ADMINISTRATION DIVISION	J. Fiacsan, Engineer

PERSONNEL AT BEGINNING AND END OF FISCAL YEAR

DIVISION	July 1, 1956	June 30, 1957	Change
Design and Administrative	115	113	- 2
Construction (Field)	21	31	+10
Surveys and Mapping (Field and Office)	29	34	+ 5
Traffic Engineering	22	20	- 2
General Clerical Staff	18	21	+ 3
TOTALS	205	219	+14

PAYROLL

The following tabulation shows the number of employees and total payrolls charged to General and Project Funds.

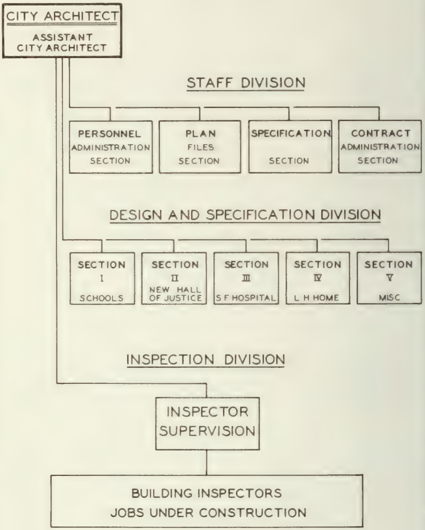
SOURCE OF PAYROLL FUNDS	Employees End of Year	Payroll 1956-57
General Fund (Budget Payroll)	60	$ 396,677
Project Funds - Gas Tax, Bonds, etc. (Interdepartmental Payroll)	159	1,447,607
TOTALS	219	$1,844,277

BUREAU OF ARCHITECTURE

DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART

JUNE 30, 1957



BUREAU OF ARCHITECTURE

Charles W. Griffith - City Architect

FUNCTIONS

The Bureau of Architecture is concerned with all new and existing City Buildings with exception of those under the jurisdiction of the Public Utilities Commission and the Recreation and Park Department. The Bureau is charged with the responsibility for the design and construction of new City buildings and the modernization, remodeling, and maintenance projects of existing City Buildings, which exceed $2,000 in cost. The activities of the Bureau are divided into two separate but related functions: (1) the preparation of estimates, drawings, and specifications, and (2) the supervision of construction.

Independent architectural firms are ordinarily commissioned to design and prepare the working drawings and specifications for new Civic buildings, under the direction of the Bureau. The Bureau assists the client agency in the preparation of the design program, arranges and participates in the many conferences necessary between the architects and the agency, reviews the drawings and specifications, checks all cost estimates closely, and certifies the proper completion of the architectural work through the various stages. The Bureau also coordinates and programs the work of the architects to insure the completion of the drawings and specifications to comply with required construction schedules. When the drawings and specifications are properly completed, the Bureau prepares all necessary forms and data so that bids may be requested and received by the Director of Public Works.

Drawings, estimates, and specifications for modernization, remodeling, and repair projects are normally prepared by architects and draftsmen of the Bureau, since this procedure is more practical and economical. This is also done with some new buildings, such as the Log Cabin Ranch buildings, wherever it is feasible.

The work of this Bureau has been increasing every year and on June 30, 1957, the entire work load was as follows:

Preliminary stage - 55 projects	$35,562,663
Working Drawing stage - 58 projects	6,624,404
Under construction - 66 contracts	15,818,364
Sub Total	$58,005,431
Construction contracts completed during fiscal year - 99 contracts	6,802,709
Total Work Load - 278 jobs	$64,808,140

ORGANIZATION

The Organization Chart indicates in a very brief manner the breakdown of divisions which has been found efficient in handling the Bureau's work. The City Architect and Assistant City Architect are indicated in one block at the head of the Bureau. There is a further breakdown of responsibilities between the two as follows:

1. The City Architect directs the design of the School program, Hospital, Miscellaneous work, Capital improvement program, the construction inspection forces, and assignment of personnel.

2. The Assistant City Architect directs the Fire Department program, Laguna Honda program, Hall of Justice program, and special architectural and engineering surveys.

3. Both the City Architect and the Assistant City Architect maintain sufficient familiarity with the other's work so that no delay in the various programs results when either is away from the office on vacation or for other reasons.

The organization of the Bureau of Architecture is further broken into three separate and distinct functions: Staff Work, Design and Specification Work, and Inspection. These functions are as follows:

STAFF DIVISION

Section I - Personnel

This section is responsible for fiscal arrangements and work orders for both architectural and related engineering services.

Section II - Plan Files

This section is responsible for requisition and procurement of blueprints, assembly of blueprints, specifications and bid forms, the storage of tracings, blueprints and specifications, and related work.

Section III - Specifications

This section is responsible for specification standards, the coordination and accuracy of the general conditions affecting the contract, and the mechanics of editing, checking, mimeographing and assembly of the specifications.

Section IV - Contract Administration

This section is responsible for the coordination of jobs under construction. All correspondence, shop drawings, reports, etc., concerning jobs under construction and completed work clear through this section.

DESIGN DIVISION

The responsibility for processing the various jobs from the initial inception through to the completion of the final drawings and specifications has been broken down into five separate sections. Each of these sections is headed by an architect who not only maintains formal and informal relationships with the client agency, but also supervises the draftsmen assigned to him for the preparation of drawings and specifications. The five sections are:

Section I	- School Work
Section II	- New Hall of Justice Bond issue
Section III	- San Francisco Hospital Work
Section IV	- Laguna Honda Work
Section V	- Miscellaneous Work

The Bureau supervises and inspects all building construction, whether it has been designed by private architects or by Bureau personnel. The responsibilities of the Inspection Division include progress and validity of the construction work, contract payments, and certification of completion of contract. The number of jobs under construction is 66, and the amount of work is $15,818,364.

The Inspection Division is headed by the Senior Supervising Construction Inspector who also supervises the Junior Supervising Construction Inspector and another Building Inspector who is assigned supervisory duties for the present. The twenty-seven building inspectors are broken down into two groups of eight and one of eleven, which are supervised by the three mentioned above.

A secondary responsibility of the Inspection Division is concerned with the jobs completed throughout the previous fiscal year. The amount of work which will be done on these completed jobs is indeterminate but, in certain cases, will be considerable. A thorough inspection must be made of each job at the end of the year bonded guarantee period, one year after acceptance of the job, and any defect found which is the result of faulty materials or workmanship must be corrected by the Contractor. A situation often develops in which much correspondence and many conferences are involved when such defective work is discovered, and considerable time is always taken in the proper disposition of such cases.

BOND ISSUES

The greatest amount of the Bureau's work load at present is processing work for which bonds have been voted. The bond issue work is as follows:

I 1948 School Bond Issue: $48,890,000

This bond issue was voted in November of 1948 and construction started on the first major school project early in 1950. The huge building program continued without interruption throughout the three years of the Korean War, which created many serious material and labor shortages. It is now practically completed and the final tentative accounting is given below:

26 Elementary Schools		$21,573,264	
4 Junior High Schools		10,530,225	
2 Senior High Schools		3,979,484	
2 City College Buildings		3,332,767	
1 Vocational School		1,697,997	
	Subtotal		$41,113,737
Miscellaneous Remodeling work		$ 4,825,000	
Equipment		2,100,000	
Administrative Expenses		175,000	
Sunset Community Center		219,741	
Land		995,301	
Balance		317,711	
	Subtotal		8,632,753
	TOTAL		$49,746,490
Subsidy Federal	$540,000		
Property Sale	316,490		
	Subtotal (subtract)		— 856,490
	TOTAL BOND FUNDS		$48,890,000

A. The construction completed within the fiscal year, consisting of one Junior High School, one Elementary School, and other miscellaneous modernization projects, amounted to $4,349,518.21.

B. Two major projects, one addition and other miscellaneous modernization, amounting to $4,281,412 were under construction and will be completed early in fiscal year 1957-58.

II 1952 Fire Department Bond Issue: $4,750,000

This bond issue work progressed extensively during the past fiscal year. The reconstruction work was completed on three fire houses, and four new fire houses were under construction.

The program is divided into two general parts:

1. The reconstruction of existing fire houses, wherever such reconstruction is practicable and economical, and
2. The construction of new fire houses to replace those houses which must be abandoned because it is not economical nor feasible to complete a reconstruction program which would make them structurally safe. The construction of new fire houses has been delayed considerably, however, by factors over which this Bureau has no control. The acquisition of sites for the new fire houses has caused the greatest delay, as it usually requires a period of a year or more to secure the site after a definite location has been determined. No design work on a new fire house can be done prior to the final acquisition of a site. It is therefore obvious that a period of approximately two years is required between selection of site and actual construction of a new fire house.

The status of this bond program as of June 30, 1957, is as follows:

A. Construction Completed

New Firehouses

Engine No.	Location	Amount	Date
34	Turk and Webster	$ 225,999.43	12/23/55
11	Shafter and Ingalls	223,114.36	1/16/56
26	Presidio and Euclid	296,482.28	3/29/56
40	Stanyan and Grattan	248,672.13	5/23/56
12	Drumm and Commercial	486,717.72	2/22/57
45	45th Avenue and Irving	159,129.16	2/28/57
*10	Folsom and Harrison	576,869.00	10/14/54
	Subtotal	$2,216,980.08	

* $128,836 from Bond Funds and $448,032 from budget appropriations.

Reconstruction of Existing Firehouses

Engine No.	Location	Amount	Date
39	1091 Portola	$ 84,325.01	5/18/55
5	1340 Powell	117,410.57	11/ 4/55
49	2155 - 18th Avenue	28,914.16	1/22/56
46	441 - 12th Avenue	70,996.32	3/23/56
6	356 - 7th Street	122,297.00	5/14/56
20	2239 Greenwich	136,977.39	5/14/56
33	117 Broad	4,198.21	9/30/54
25	3rd and Arthur	22,122.36	12/31/54
36	551 - 26th Avenue	19,931.51	2/11/55
41	1325 Leavenworth	169,458.86	3/12/57
	Subtotal	$ 776,631.39	

Total number projects completed	17
Total Amount	$2,993,611.47

B. Under Construction

Engine No.	Location	Amount	Type
38	Ocean and Phelan	$ 305,522.10	New
13	26th Street between Church and Dolores	313,689.65	New
47	499 - 41st Avenue	77,789.20	Reconstruction
4	676 Howard Street	213,366.90	Reconstruction

Total number projects under construction	4
Total Amount	$ 910,367.85

C. Design Stage

Engine No.	Location	Amount	Scheduled for Advertising
21	Grove and Baker Streets	$ 185,000.00	October 1957
24	100 Hoffman Avenue	17,089.95	November 1957
	Subtotal	$ 202,089.95	

Projects Delayed Pending Acquisition of Property

Engine No.	Location	Amount	
14	Oak Street west of Franklin	$203,000	
*15	2150 California Street	(No allotment)	*new
37	Site not selected		
23	Site not selected		

Allotment in Preparation

The Fire Department has requested preparation of allotment for Engine 22, 16th and Irving Street. This allotment is being prepared at present. There is a balance of approximately $243,789 which has not been appropriated.

Projects Deferred Indefinitely

Engine No.	Location
3	1067 Post Street
8	1648 Pacific Avenue
16	909 Tennessee Street
17	416 Jessie Street
18	Wilde Avenue and Girard Street
19	4th and Merrimac Streets
28	1814 Stockton Street
48	20th and Wisconsin Streets

There are 12 projects for which financing has not yet been completed. These are estimated as follows:

7 houses (reconstruction)	$ 350,000
4 Houses (new)	800,000
Property Costs (estimated)	100,000
TOTAL	$1,250,000

III **1954 Laguna Honda Bond Issue: $5,475,000**

The preparation of drawings and specifications for this work began early in 1955, as soon as the bond funds were made available. The design work has progressed rapidly and contracts in approximate amount of $3,125,000 have been awarded during the fiscal years 1955-56 and 1956-57. The construction of one project, Alterations to Kitchen, Bakery and Commissary, which involved approximately $80,000 of bond funds, was completed on November 11, 1956.

The status of the bond issue work, as of June 30, 1957, was as follows:

Status	No. of Projects	Amount	Percentage
Completed	4	$ 542,436	10.5%
Under construction	4	2,582,952	50%
Plans and Specifications almost completed - to be advertised during fall of 1957	4	2,049,612	39.5%
Subtotal for Construction	12	$5,175,000	100%
Equipment		300,000	
TOTAL		$5,475,000	

The Laguna Honda Bond Funds have been supplemented by budget appropriations and from other sources, and the total work is therefore not shown above. The total work, including money received from all sources, is given below:

Status	No. of Projects	Amount
Work completed	10	$1,133,943
Under construction	7	2,798,813
Planning stage	9	2,049,612
TOTAL		$5,982,368

IV 1954 San Francisco Hospital Bond Issue: $5,830,000

The preparation of plans and specifications for this Bond Issue also began early in 1955, as soon as bond funds were available. It has progressed rapidly, but is not as far along as the Laguna Honda Bond Issue, because of the necessity of close coordination of the work with the space available for construction.

The status of the work as of June 30, 1957 was as follows:

Status	No. of Jobs	Amount	Percentage
Completed	8	$ 416,478	8%
Under construction	6	1,176,713	22%
Working drawing stage (to be advertised during fiscal year 1957-58)	5	1,565,000	29%
Preliminary stage	7	2,171,809	41%
Subtotal	26	$5,330,000	100%
Equipment		500,000	
TOTAL BOND FUNDS		$5,830,000	

The San Francisco Bond Funds have been supplemented by an emergency ordinance from budget appropriations and from deferred maintenance appropriations which are not reflected above. The total amount of work which has been completed or is being processed at the Hospital, is as follows:

Status	No. of Projects	Amount
Work completed	4	$1,082,095
Under construction	9	1,621,364
Planning stage	12	2,991,000
TOTAL		$5,694,459

V 1954 Civic Center Exhibit Hall Bond Issue: $3,275,000

The construction of the Civic Center Exhibit Hall was 37% completed as of June 30, 1957, and the construction was progressing favorably. The construction contract was for $3,711,000, contract was awarded in August 1956, and work started September 17, 1957. The total project cost, including professional fees and administrative costs, will exceed $4,000,000 and has been partially financed from the 1947 Street Bond Issue and from budget appropriation. The work was delayed because of the fact that utilities, gas lines, water lines, telephone lines, and a bus line had to be moved before construction could begin on the ramp. It was also delayed by weather in January and February, by a strike in February, and the contractor claims shortage of labor during May and June of 1957.

However, the contractor realizes the importance of an early completion, and has agreed that, barring unforeseen conditions beyond his control, the building will be available for occupancy on March 4, 1958.

VI 1956 Hall of Justice Bond Issue: $19,475,000

The design work for the new Hall of Justice progressed favorably during fiscal year 1956-57, and on July 1, 1957 the preliminary drawings and model were completed and approved. The Architect had started preparation of the working drawings and was approximately 1-1/2 months ahead of schedule. It is expected that the working drawings will be completed August 1, 1958, that construction work will start on or before January 1, 1959, and that the Hall of Justice will be completed on July 1, 1961.

The revised estimate, prepared on the preliminary drawings, indicates that the construction cost will be approximately $15,500,000.

The occupancy of the new Hall of Justice will be as follows:

Occupancy of Building:	Cost %	Area %	Sq. Ft. Area
Police Department - City Prison	58.00	63.60	454,000
Criminal Courts (4 Municipal)	9.20	5.20	38.000
Criminal Courts (4 Superior)	6.50	5.30	38,500
Criminal Courts (3 Traffic)	6.70	7.30	54,000
District Attorney	4.10	4.30	30,500
Adult Probation	3.70	3.80	22,000
Public Defender	.85	.90	6,200
County Clerk (Criminal Division)	.45	.50	5,500
Coroner	2.80	2.60	18,500
Sheriff's Detention Jails	7.70	6.50	46,000
TOTALS	100.00	100.00	713,200

VII 1956 School Bond Issue: $27,000,000

A. General Information -

The Bureau assisted the Unified School District in preparing data for this bond issue, preparing estimates for the badly needed elementary and secondary schools. The Bond Issue was overwhelmingly approved by the electorate in the election of November 1956.

The following was the basic cost data for the Bond Issue:

Project	Name	Amount
101	City College of San Francisco	$2,400,000
105	J. O'Connell High School	330,000
113	S.E. Senior High School	4,400,000
114	S.W. Senior High School	4,400,000
(none)	High School Physical Education Facilities	540,000
120	Francisco Junior High School	825,000
121	Horace Mann Junior High School	275,000
122	J. Denman Junior High School	440,000
123	Portola Junior High School	550,000
124	Roosevelt Junior High School	315,000
125	Silver Avenue Junior High School	1,150,000
130	Clarendon School	880,000
131	Golden Gate School	1,070,000
132	Longfellow School	990,000
135	Starr King School	440,000
(none)	Remodeling and Reconstruction	3,500,000
(none)	Equipment	1,500,000
(none)	Contingencies	1,785,000
(none)	Unallocated	1,210,000
	TOTAL	$27,000,000

B. Progress of Work -

Project 101 - City College of San Francisco (additions and new buildings)
Architect: Milton Pflueger
Preliminary drawings prepared and being checked

Project 105 - J. O'Connell Tech. High School (additions)
Architect: Hunt, Trudell, and Burger
Program in preparation

Project 113 - S.E. Senior High School (new high school)
Architect: Gardner Dailey
Program and preliminary studies in preparation

Project 114 - S.W. Senior High School (new high school)
Architect: Masten & Hurd
Preliminary drawings in preparation

High School Physical Education Facilities (various schools)
Programs in preparation

Project 120 – Francisco Junior High School (addition)
Architect: J. Francis Ward
Preliminary drawing in preparation

Project 121 – Horace Mann Junior High School
Program in preparation

Project 122 – J. Denman Junior High School (auditorium)
Architect: Mario J. Ciampi
Preliminary drawings in preparation

Project 123 – Portola Junior High School
Architect: Donald Francis Haines
Architect's contract delayed pending closing of Brussels Street

Project 124 – Roosevelt Junior High School
Program in preparation

Project 125 – Silver Avenue Junior High School (Phase II)
Architect: Aleck Wilson
Working drawings in preparation
Scheduled for advertising for bids February 26, 1958

Project 130 – Clarendon School (new elementary)
Program in preparation

Project 131 – Golden Gate School (new elementary)
Architect: Clarence Mayhew
Program in preparation
Work delayed temporarily by acquisition of property and closing of Elm Street

Project 132 – Longfellow School (new elementary)
Architect: John Carl Warneke
Preliminary drawings in preparation

Project 135 – Starr King School (addition)
Architect: Blanchard & Maher
Working drawings in preparation
Scheduled for advertising for bids on April 16, 1958

Remodeling and Reconstruction (various schools)
Programs in preparation

VIII Proposed Bond Issue: New Civil Courts Building and Remodeling of City Hall - $22,150,000

During the spring of 1957, the Bureau, working in close cooperation with the architects for the Civic Center development plan, the Advocates of a new Courts Building, and the Municipal Conference prepared estimates for this proposed work.

The Bond Issue is based on the Report of the Architects and Engineers for the San Francisco Civic Center Development Plan, dated May 7, 1957. In their survey of existing conditions at the Civic Center, the consultants found that:

> "Facilities which are now provided in the Civic Center have become over-crowded requiring the use of temporary structures and rental properties. In many cases, offices are scattered, and no provision for expansion is available. The present permanent spaces have become largely outmoded. It is essential that additional space be provided and that existing space be rehabilitated to provide efficient up-to-date accommodations that are suitable for the functions to be housed in them."

As a solution to the space problems the Consultants recommended:

1. The construction of a New Civil Courts Building on Marshall Square, to house the Municipal and Superior Courts, and all their attendant facilities, at an estimated cost of $16,207,254.
2. The remodeling of the City Hall to provide office space for the Mayor, Chief Administrative Officer, Board of Supervisors, and the majority of the City and County Departments, at an estimated cost of $7,918,462.
3. The future construction of an Annex Office Building across McAllister Street from the City Hall in the block bounded by McAllister, Van Ness, Polk, and Redwood Streets. This building would be needed in the future but since it was not urgently required at present its construction should be deferred until a later date.

The total amount of the Bond Issue recommended by the Consultants, is as follows:

New Civil Courts Building	$16,207,254
Remodeling of City Hall	7,918,462
TOTAL	$24,125,716

This amount was later modified in conferences with interested citizens and public officials by the reduction of facilities and space as follows:

New Civil Courts Building	$14,379,450
Remodeling of City Hall	7,770,550
TOTAL	$22,150,000

The Bond Issue was approved by the Mayor's Bond Screening Committee on June 3, 1957, Finance Committee on June 5, 1957, and by the Board of Supervisors on June 10, 1957. The Bond Issue will be presented to the electorate in November 1957.

IX Proposed Bond Issue - Rehabilitation of Civic Center Auditorium

An amount of $6,000 was included in the 1957-58 budget for preparing estimates for this proposed bond issue. This data will be prepared in time so that it can be presented on the ballot in the 1958 June elections. It is expected that the total amount required will exceed $4,000,000.

X Proposed Bond Issue - Steinhart Aquarium: $3,465,000

Data was prepared in time so that this Bond Issue could be presented on the 1957 November election. However, the proposals of the Aquarium did not receive backing of the Mayor and interested civic organizations, and will therefore not be on this ballot.

It is expected that the Bureau will be requested to furnish revised estimates of a more extensive program during this fiscal year for the purpose of providing a basis for a bond issue either in the Spring or Fall of 1958.

XI Proposed Bond Issue - Public Library: $5,190,155

Data was prepared for this Bond Issue, which includes rehabilitation and additions to the Main Library building and nine new branch libraries, in time so that it would be presented on the November 1957 ballot. However, it did not receive the support of the Mayor and downtown organizations, and will therefore not be on this ballot. It will probably be revived at a later date, but it is not known whether an effort will be made to get it on the 1958 June or November ballots.

PERSONNEL

The permanent allowance for technical employees increased by three, one F-108 architect, and two A-106 inspectors, because of the increasing work load. However, it has become increasingly difficult to obtain qualified employees in the architectural and drafting classifications, and at present one F-108 architectural position and three architectural drafting positions are not filled. There was a lesser number of temporary employees due principally to the fact that there was closer coordination of the inspection work.

	30 June 1956		30 June 1957		Change	
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
City Architect	1	0	1	0	0	0
Asst. City Architect	1	0	1	0	0	0
Architects	8	1	9	0	+1	-1
Sr. Arch. Draftsmen	9	1	9	0	0	-1
Arch. Draftsmen	8	0	5	1	-3	+1
Jr. Draftsman	1	0	1	0	0	0
Office Assistants	2	1	2	0	0	-1
Sr. Clerk	1	0	1	0	0	0
Gen. Clerk Steno.	4	0	3	1	-1	+1
Gen. Clerk Typist	3	1	4	0	+1	-1
Super. Const. Inspector	2	0	2	0	0	0
Building Inspector	15	12	17	7	+2	-5
TOTAL	55	16	55	9	0	-7

TOTAL PERSONNEL - 64

The Bureau's personnel is divided into four groups according to location. The duties performed by these groups are briefly described below:

Personnel	Group	Location	Activities
7	1	Room 265, City Hall	Administrative Conferences, Assembly of Plans and Specifications for Bidding, General Files, Drafting for Budget
9	2	Room 252, City Hall	Inspection Estimates, Preliminary Design, Program and Budget Section, Analysis of Construction

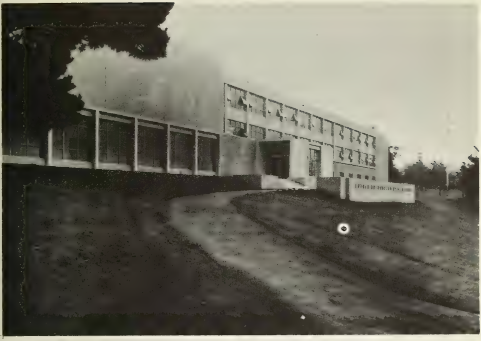
Personnel	Group	Location	Activities
24	3	45 Hyde Street	General Drafting Room, Specifications, Drawings, Research, Checking and Report Section
24	4	In the field	Field Inspection

TOTAL PERSONNEL - 64

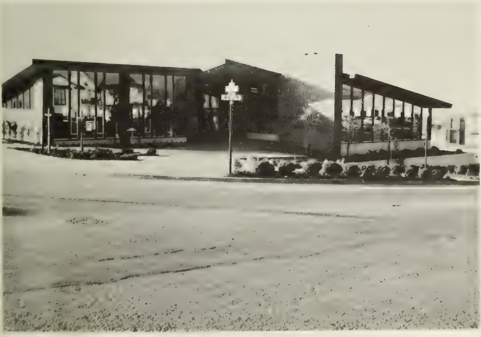
WORK DONE

The work completed by the Bureau during the fiscal year of 1956-57 was fairly evenly divided between the office and the field. The number of jobs and dollar value of the work processed was as follows:

	Number of Jobs	Amount
Total work under construction at end of fiscal year	66	$15,818,364.00
Contracts awarded and under construction during fiscal year	98	9,085,167.19
Amounts expended for construction during fiscal year	98	9,724,888.59
Work under preparation for Advertising and award of contract during fiscal year 1957-58	66	6,624,404.00



LUTHER BURBANK JUNIOR HIGH SCHOOL



LAKE MERCED LIBRARY

LOG CABIN RANCH FOR BOYS

FIREHOUSE FOR ENGINE COMPANY NO. 38

BUREAU OF BUILDING INSPECTION

Lester C. Bush, Superintendent

FUNCTIONS

For the purpose of ensuring compliance with City ordinances and the State Housing Act the Bureau of Building Inspection reviews plans and inspects construction and installations involving structural, electrical and mechanical work throughout the City. It also studies and reports on legislation affecting buildings and structures, and proposes new legislation as required. It is also the enforcing agency for the City Planning Code.

Urban Renewal Program

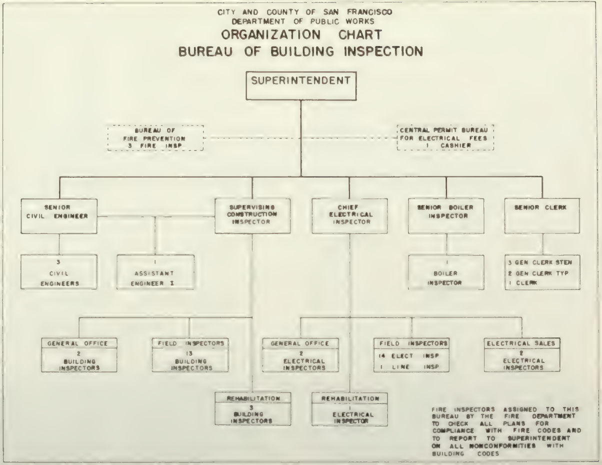
This program commenced with the title of Slum Clearance Program and was later changed to the Urban Renewal Program. This program has been in effect for slightly over three years with a minimum number of personnel assigned.

The recommendations of a committee of the Mayor call for an accelerated program, as well as a more effective one, to establish a continuing program to eliminate or correct conditions in blighted areas by requiring compliance with existing codes. All code enforcement agencies are involved. The Superintendent was recently appointed Coordinator of this program by the Mayor.

A condemnation program was placed in effect in this bureau about three years ago under the authority of the San Francisco Building Code. All types of buildings are involved, with the exception of occupied hotels and apartment houses which, however, may be involved where only structural or safety conditions are concerned. This program has been very effective in either restoring unsafe buildings to meet requirements of the codes, or in causing the demolition of them. While this program does not involve the problem that Urban Renewal does, nevertheless it accomplishes a great deal for our city in correcting hazardous conditions in structures and abandoned buildings. In the more than 1100 cases investigated, 400 buildings were demolished, and 300 restored. There are 100 cases in the City Attorney's Office for abatement, and there is a backlog of about 300 others.

Buildings and Structures

The bureau consults with architects, engineers, contractors, and home owners in the preliminary stages of the preparation of their plans whether for new buildings or for alterations to existing buildings. It studies and reports on legislation affecting building matters and proposes new legislation as required.



CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
BUREAU OF BUILDING INSPECTION

SUPERINTENDENT
BUREAU OF FIRE PREVENTION 3 FIRE INSP
CENTRAL PERMIT BUREAU FOR ELECTRICAL FEES 1 CASHIER
SENIOR CIVIL ENGINEER
SUPERVISING CONSTRUCTION INSPECTOR
CHIEF ELECTRICAL INSPECTOR
SENIOR BOILER INSPECTOR
SENIOR CLERK
3 CIVIL ENGINEERS
1 ASSISTANT ENGINEER I
1 BOILER INSPECTOR
3 GEN CLERK STEN
2 GEN CLERK TYP
1 CLERK
GENERAL OFFICE 2 BUILDING INSPECTORS
FIELD INSPECTORS 13 BUILDING INSPECTORS
GENERAL OFFICE 2 ELECTRICAL INSPECTORS
FIELD INSPECTORS 14 ELECT INSP 1 LINE INSP
ELECTRICAL SALES 2 ELECTRICAL INSPECTORS
REHABILITATION 3 BUILDING INSPECTORS
REHABILITATION 1 ELECTRICAL INSPECTOR

FIRE INSPECTORS ASSIGNED TO THIS BUREAU BY THE FIRE DEPARTMENT TO CHECK ALL PLANS FOR COMPLIANCE WITH FIRE CODES AND TO REPORT TO SUPERINTENDENT ON ALL NONCONFORMITIES WITH BUILDING CODES

The bureau examines and reports on all applications for permits submitted to the Department of Public Works for new buildings, alterations to existing buildings, billboards and signs (electric and non-electric); inspects all this work as it progresses; makes a final inspection of new buildings or where a change of occupancy classification occurs, and issues Certificates of Final Completion when the work is finished.

Four "called inspections" on buildings under construction are made at the following times:

a. Foundations or other concrete forms must be inspected and approved before concrete is poured;

b. Inspection before interior lathing. This is to see that all bracing, framing and firestops are installed;

c. Inspection before exterior or structural plaster is in place;

d. Final inspection prior to occupancy.

Electrical Work

The bureau regulates and supervises the installation of interior electrical wiring of commercial, industrial and residential buildings and insures by frequent and adequate inspection that the standards provided for in City ordinances, State and National codes are maintained. Closely tied in with the inspection of interior wiring of buildings are other activities of the bureau made necessary by the provisions of electrical ordinances affecting other City departments, and which entail cooperation with the Fire Prevention Bureau, Police Department, Health Department and with the Division of Industrial Safety of the State of California. Some of these activities are summarized in the following paragraphs.

Reports of fire presumably caused by defective electrical installations and all places reported to be of potential electrical hazard are also checked by the electrical inspectors.

Coin operated amusement devices with electrical controls are licensed by the Police Department, and before issuance of permit are required to meet the approval of the electrical division of this bureau.

Night clubs and places of public assembly are licensed through the Health Department, and before a permit to operate is granted the electrical requirements of this bureau in regard to adequate lighting, emergency and exit lights must be complied with, and approval forwarded to the Health Department.

A copy of all complaints and violations of the Electrical Safety Orders of the State of California issued to property owners is filed with this bureau, is checked and verified by the electrical inspectors, and held in the files until final approval is given.

State of California laws require that the electrical installation of wiring circuits, fixtures, signs, motors and electrical appliances be made by contractors licensed by the State, and San Francisco ordinances require that such licensed contractors be registered with this bureau. Industrial plants which have their own plant electricians must also register with this bureau.

All spray painting establishments in the City of San Francisco are licensed through the Fire Prevention Bureau, and before licenses are issued the electrical work connected therewith must be approved by this bureau.

Boilers and Air Tanks

Steam boilers and air pressure tanks are inspected to ensure compliance with all existing laws.

ORGANIZATION

Duties of the various members of the staff are described in the following paragraphs.

Superintendent - In addition to supervising the office he takes an active part in the deliberations of various departments of the city government, as well as other organizations, with reference to matters of building construction, the building code, and building safety, and is also Coordinator of Urban Renewal.

Supervising Construction Inspector - Acts as assistant to the Superintendent in the field; assigns and supervises the work of building inspectors; prepares records and reports, and checks construction progress. He also supervises the Condemnation Program.

Building Inspectors - One building inspector assists the Supervising Construction Inspector. He assists the public at the counter and provides them with the information they seek concerning various building regulations. Handles all applications for permits at last step before permits are issued.

One building inspector represents the Director, Department of

Public Works, on all cases coming before the Board of Permit Appeals with the exception of new construction. He inspects and reports on all night clubs and dance halls, when requested by the Police Department, and all condemnations of buildings for the Department of Public Works.

Thirteen building inspectors are assigned to specific districts into which the city is divided and are charged with the responsibility of inspection work in their respective districts. This includes new construction of all types, alterations, billboards and signs. They report on all applications for construction in their districts prior to examination by the divisions of the bureau; prepare and post Certificates of Final Completion; check and follow up complaints; interview property owners; and appear before courts in matters of condemnation and prosecution.

Three building inspectors are assigned to the Urban Renewal Program, and the Condemnation Program.

Boiler Inspectors - Make all installation inspections where any pressure vessel is installed. Inspect all boilers and air pressure vessels regularly when they are not insured, and inspect and recommend repairs to defective equipment. As deputy inspectors they must check all requests made by the Division of Industrial Safety and report any action taken by the city. They investigate all accidents where pressure vessels are involved and report the probable cause to the State and to the National Board of Boiler and Pressure Vessel Inspectors. One inspector is a member of the A.S.M.E. Boiler Code Committee, and passes on all new A.S.M.E. Code changes, and submits his report each month to the New York office of the A.S.M.E. Complaints about pressure vessels are investigated and the necessary action taken to eliminate any defects or violations, if found.

Senior Engineer (Civil) - Acts as Chief Structural Engineer and as principal assistant to the Superintendent; reviews engineering data submitted for approval of new materials and assemblies, and makes recommendations to the Superintendent regarding such approvals; and supervises the work of the other engineers in the bureau.

Structural Engineers (Civil) - Check and report on all plans pertaining to structural engineering; make field inspections; follow up matters concerning structural safety brought to their attention by the Supervising Construction Inspector or the district building inspectors; and assist other departments or bureaus in structural matters.

One Engineer, Civil, examines all plans and details for new construction and estimates the cost thereof. He also represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals which concern new construction.

Senior Clerk - In charge of all clerks in the bureau and all administrative work.

Chief Electrical Inspector - Under general direction assigns, supervises and reviews the work of electrical inspectors; approves or disapproves plans and specifications for electrical installations; supervises the maintenance of inspection records; and makes required reports.

Two electrical inspectors are detailed to the enforcement of the Electrical Sales Ordinance. This ordinance governs the sale, display, or giving away as a premium, all electrical material, devices and appliances designed for attachment to, or installation in or on any electrical circuit or system for light, heat or power. This entails visiting all retail stores, premium stores, factory agents, jobbers, manufacturers, and wholesalers to inspect all materials, devices, and appliances, and to determine whether they are approved by this department before they can be sold, displayed, or installed in San Francisco. In many cases this means granting a provisional approval on articles that have been submitted to Underwriters' Laboratories, Inc. for testing but testing not having been completed allows a manufacturer to install or sell these appliances or materials with a proviso that any corrections required be made in the field. There are 2272 retail stores registered under this ordinance at present, which are visited regularly for the purpose of inspecting the merchandise. As more merchants are going into business all the time and many ownerships are being changed, it is necessary to visit these stores to check their registration and inspect their merchandise.

The Line Inspector - Inspects all installations, alterations, and maintenance of overhead lines owned and operated by public and private utilities used for the purpose of distributing electric power, light, communication and signal transmission, to see that they conform to the Rules for Overhead Line Construction (G.O. 95), Public Utilities Commission, State of California, and the San Francisco Electrical Code. The line inspector also checks plans and specifications and inspects all overhead lines pertaining to trolley coach installations. He inspects temporary electrical street decorations when supported by trolley span wires, or messengers, and inspects installations of radio and television antennas. He checks all underground districts to see that they are kept clear of all overhead wires and cables, and checks the erection of scaffolds that may be in proximity to high voltage lines.

Two electrical inspectors are assigned to office work. They handle all complaints and requests for information from the public.

One electrical inspector is assigned to the Urban Renewal Program.

Fourteen electrical inspectors are assigned to districts in the city and each handles all of the electrical work in his assigned district except those items under the Electrical Sales Ordinance.

BUILDING CONSTRUCTION

Fiscal Year	Permits	Cost of Construction
1953-1954	8601	$62,470,265
1954-1955	8961	61,812,718
1955-1956	9445	71,692,205
1956-1957	11527	66,725,530

WORK DONE

The extent of routine operations of this Bureau for the fiscal years 1955-1956 and 1956-1957 is set forth in the following tabulation taken from the records of the Central Permit Bureau.

Type of Construction	Number of Permits 1955-1956	Estimated Cost	Number of Permits 1956-1957	Estimated Cost
1A	7	$13,805,253	12	$12,094,579
1B	7	8,001,764	19	10,387,793
2	1	60,000	-	-
3	44	6,081,413	40	3,553,195
4	28	777,052	27	706,370
5	1,225	24,411,910	818	15,912,586
Alterations	8,133	18,554,122	10,611	24,071,007
TOTALS	9,445	$71,691,514	11,527	$66,725,530

Type 1A - Steel frame with reinforced concrete walls and floors. Fire-resistive construction.

Type 1B - Built entirely of reinforced concrete. Fire-resistive construction.

Type 2 - Similar to Type 1, but with limitations.

Type 3 - Wood frame floors with exterior walls of masonry. Ordinary masonry construction.

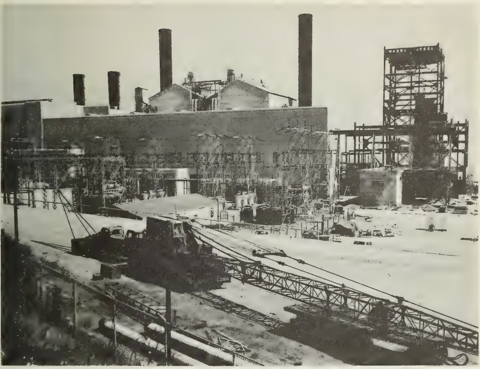
Type 4 - Light incombustible frame construction.

Type 5 - Wood frame construction.

BUREAU STATISTICS

FOR FISCAL YEAR

Inspections reported by inspectors of buildings	51,231
Projects remaining on which permits have been issued that have not been reported completed by inspectors of buildings	3,759
Complaints that have been reported adjusted by inspectors of buildings	3,172
Inspections reported by inspectors of boilers	1,317
Complaints and requests for information recorded	368
Applications for permits examined by and approved by structural engineers	3,350
Applications for permits examined and approved by plan checker	836
Miles traveled during the year by 30 passenger cars on inspection service	207,560
Permits issued, wiring, fixtures, signs	17,475
Inspections made	56,983
Complaints investigated (found defective)	5,599
Installations uncovered that were not with the department ("sneaked-in" jobs)	2,725
Installations in progress as of June 30, 1957	4,723
Installations completed	18,600
Pin ball machine inspections	850
Juke box inspections	120
Electrical Sales inspections	4,162
Overhead line inspections	3,915



P.G. & E. SUBSTATION - HUNTER'S POINT

ADDITION AT HAMM'S BREWERY - ALABAMA and ALAMEDA STREETS

320 MARKET BUILDING

550 KEARNY BUILDING

ORGANIZATIONAL RELATIONSHIPS

MAINTENANCE, REPAIR AND OPERATION

DIRECTOR
Sherman P. Duckel

Assistant Director - Maintenance and Operation
L.J. Archer

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
B. Benas, Superintendent

FUNCTIONS
1 - Maintenance and Repair of Sewerage System
2 - Operation and Maintenance of 14 Sewage Pump Stations
3 - Operation and Maintenance of 3 Sewage Treatment Plants
4 - Control of Industrial Waste Discharge to Sewers
5 - Air Pollution Surveys
6 - Advisory Service to other City Departments on Sewage Treatment.

PERSONNEL ALLOWANCE

(a)	Budgeted	243
(b)	Assigned from other bureaus and departments	12
(c)	Contract employees on hired trucks	5
	TOTAL	260

EXPENDITURES

(a)	Budgeted by Bureau	$1,925,003
(b)	Funds from other sources	572
	TOTAL	$1,925,575

BUREAU OF STREET REPAIR
F. D. Brown, Superintendent

FUNCTIONS
1 - Maintenance and Repair of Public Streets
2 - Operation and Maintenance of 3 Lift Bridges
3 - Operation and Maintenance of Asphalt Plant
4 - Operation of Granite Curb Yard
5 - Operation and Maintenance of Broadway Tunnel
6 - Removal of Earth Slide Deposits from Street Areas

PERSONNEL ALLOWANCE

(a)	Budgeted	173
(b)	Assigned from other Bureaus	1
	TOTAL	174

EXPENDITURES

(a)	Budgeted by Bureau	$1,552,800
(b)	Funds from other Sources	90,519
	TOTAL	$1,643,319

BUREAU OF BUILDING REPAIR
W.C. Zecher, Superintendent

FUNCTIONS
1 - Maintenance and Repair of Public Buildings
2 - Repair of Monuments on Street Areas
3 - Provide Operating and Custodial Personnel in certain Public Buildings
4 - Paint Street Striping and Markings
5 - Repair of Street Structures and Sidewalks fronting on City Property
6 - Maintenance of Street Name Signs

PERSONNEL ALLOWANCE

(a)	Budgeted by Bureau	346
(b)	Assigned from Other Bureaus	2
	TOTAL	348

EXPENDITURES

(a)	Budgeted by Bureau	$2,543,058
(b)	Funds from Other Sources	924,279
	TOTAL	$3,467,337

BUREAU OF STREET CLEANING
S.J. Sullivan, Superintendent

FUNCTIONS
1 - Cleaning Public Street Surfaces
2 - Cleaning 5 Pedestrian Underpasses
3 - Cleaning 3 Pedestrian and Vehicular Tunnels
4 - Planting and Maintaining Street Trees, Shurbbery and Ground Cover

PERSONNEL ALLOWANCE

(a)	Budgeted by Bureau	380
(b)	Assigned from Other Bureaus	2
	TOTAL	382

EXPENDITURES

(a)	Budgeted by Bureau	$1,984,399
(b)	Funds from other Sources	51,967
	TOTAL	$2,036,366

SUMMARY

Total Personnel Allowance	$ 1,164
Total Expendutures, less reimbursements....	$8,880,016

MAINTENANCE AND OPERATION

Lawrence J. Archer, Assistant Director

Maintenance and operation activities of the Department of Public Works has, since October 1, 1951, been centered at 2323 Army Street in the four bureaus of Sewer Repair and Sewage Treatment, Street Repair, Building Repair and Street Cleaning.

A chart facing this page indicates, in brief detail, the organizational relationship of the four maintenance and operation bureaus, including fund expenditures and personnel relationships.

The number of employments authorized for these bureaus during the year total 1142, a net increase of 23 over the previous year. The additional employments included 12 chauffeurs and one laborer for assignment as operators of new City trucks in replacement to previously hired trucks with drivers, one cement finisher for duty previously assigned to one paver in previous years, 2 chauffeurs, one laborer, 3 gardeners, one sub-foreman gardener and 4 interdepartmental craft employments; all as indicated in Tables A and B.

There are 83 different position classifications employed in the maintenance and operation bureaus. These classifications include professional engineers, administrative positions, chemists, craftsmen, operating engineers, clerks, maintenance and custodial personnel.

Funds providing for the services of maintenance and operation bureaus during the year amounted to a total of $9,332,090 including both budget appropriations and funds received from other sources. From these funds a total of $8,880,016 was expended. With an estimated total population of 800,000 for the City and County of San Francisco, the year's expenditures for this segment of the department's activity amounted to $11.10 per capita.

HANDICAPS TO EFFICIENT OPERATION

The maintenance and operation bureaus work under several handicaps, imposed by insufficient money appropriations or legal limitations, which obstruct efforts to gain optimum results in operations, principally as follows:

A - Equipment Maintenance at Southeast Sewage Treatment Plant

Appropriations received for maintenance and repair of mechanical equipment are inadequate for accomplishing even a minimum of proper upkeep at the Southeast Plant. Deficiencies in this respect are leading to critical conditions which may at any time cause extensive breakdowns with attendant necessity of not only by-passing the Southeast Plant with resultant diversion of raw sewage to Islais Creek, but may also require the by-passing of North Point Plant with consequent heavy pollution of the north shore area, including Marina and Aquatic Park.

The Southeast Sewage Treatment Plant was placed in operation on December 1, 1951. The total capital outlay, to this time, amounts to $7,108,000, of which $1,278,000 was expended for mechanical equipment.

For the coming year, the Department of Public Works requested $18,005 for the maintenance and repair of mechanical equipment at this plant, but received only $8,750, as compared to $10,158 for the current year, which represents only 0.7 and 0.8 percents respectively of the cost of equipment - an amount much too small to properly safeguard the City's investment. In consequence of the deficient appropriation it will be necessary that the department immediately prepares a supplemental appropriation request to assure uninterrupted service at this important plant.

B - Present Charter Limitation of $2,000 for Repair Work

The present charter limitation of $2,000 for repair work performed by City forces is too low under prevailing conditions and operates to reduce efficiencies in service. This limitation should be increased to $5,000 in order to regain the same work level as in 1932.

The City Charter (Section 95) provides that "the construction, reconstruction or repair of Public Buildings, Streets, Utilities or other Public Works or improvements, and the purchasing of supplies, material and equipment, when the expenditure involved in each case shall exceed the sum of two thousand dollars ($2,000) shall be done by contract, except as otherwise provided by this Charter" for emergency work. This limitation of $2,000 does not include strictly maintenance work.

Two reports, prepared by private firms retained by the City, have commented upon this adverse situation and excerpts from their comments are quoted below.

> Street Transportation Report of January 7, 1957 prepared by the Automotive Safety Foundation - "The antiquated limitation of $2,000 on any project performed by municipal forces has further complicated efficient maintenance ... In the reports received from the various departments as a part of this study, it was apparent that this limitation produces numerous inefficiencies. City maintenance crews can't carry out projects which, if undertaken, could reduce

> costs. It is a basic tenet common to most governmental operations that work should be performed by contract forces wherever economically justified. No theory of government, however, would suggest that the City deliberately penalize itself to adhere to the tenet when economic justification is lacking . . . Subsequent inflation has increased the oppressiveness of this fixed limitation . . . Thus, it is suggested that the Controller make a complete study, in conjunction with the affected departments, and report to the Board of Supervisors on the ramifications of this outmoded regulation."
>
> Report on a study of the Department of Public Works, by Griffenhagen & Associates, January 1952 - "The whole matter of conducting pavement reconstruction, resurfacing, and major maintenance projects by force account (in this case by the Bureau of Street Repair doing the work using City employees, equipment and materials) should be decided on a cost basis, regardless of whether the project cost is under or over $2,000. If the Bureau of Street Repair can do the work, or certain kinds or amounts of work, as well and cheaper than independent contractors, it should be permitted to do so within reasonable limits. Several large cities have clearly proved that their Public Works Departments are able to do certain kinds of work substantially cheaper with City forces than by contract. Small, unusual, and complicated construction and maintenance projects can usually be done cheapest and best by force account on direct assignment to the bureau, thereby making it unnecessary to prepare specifications, which on such projects are often difficult if not impossible to develop satisfactorily, and relieving the City of the expense of preparing contract plans and of conducting contract negotiations. The project cost at which it is reasonable to expect that the City can prepare plans and specifications, pay the contractor, and inspect the contract work, at a lower total cost than the total expense to the City for doing the work by force account should be fixed as the maximum limit for the direct assignment of force account work to the Bureau of Street Repair. This maximum limit is now $2,000 for all kinds of work. This appears to be too low under prevailing conditions. It is suggested that the Charter should provide a higher limit for pavement maintenance work. It is recommended that consideration be given to revising the Charter to permit the Department of Public Works to do certain kinds of work by force account up to a maximum of $5,000, but retain the present $2,000 limit for purchases."

In the past year there were 35 contracts awarded by this department, ranging in cost from and including $2,000 to $5,000 for a total amount of $128,865. Of this number of contracts, 23 could have been readily performed by the City Forces. The present limitation of $2,000 increases the job or unit costs or other expenses to the City for work costing between $2,000 and $5,000 in the following principal instances:

(a) The preparing of plans and specifications and the providing of inspection and administrative services, as necessary for public contract, are often nearly as costly for small jobs as the actual contract work.

(b) Due to the heavy contractural work load in the department and the limited technical personnel for its execution, the need of contracting jobs of $2,000 to $5,000 delays other larger contractural work. Such delays in this inflationary period result in greater job costs.

(c) The extent of resurfacing street pavements is limited to about 800 lin. ft. for a street width of 400 feet, even though contiguous blocks may be as much in need of resurfacing. Such limitations require frequent costly moves to other locations. It is estimated that moving time during the past year consumed a total of about 120 hours, or 15 working days. Indirect losses due to these interruptions probably approximates the same amount of time. The cost of a resurfacing crew, including equipment charges, is about $600 a day.

An increase in the monetary limitation would permit an increase in the jobs and decrease the number of moves. By increasing the limitations from $2,000 to $5,000, the average size of jobs could be about doubled, and therefore, the number of moves would about be halved. Another serious result of the $2,000 limitation is public dissatisfaction. There are many streets where the extent of warranted resurfacing is greater than can be done for $2,000. After resurfacing that portion most badly in need it is not possible to convince residents in the adjacent blocks that their street was not in as bad condition.

(d) On many occasions the work to be performed in Public Buildings is urgent and the extended time required under public contract procedure may result in added costs of operation or inconveniences to the department for which the work is being accomplished. Sixty days alone are normally required between the time that plans and specifications are completed and contract work begins in order to meet the requirements for advertising, preparing for receipt of bids and processing of final contract documents. Also it costs approximately $60 to advertise each job.

(e) Details of a job are often indeterminate at the time the plans and specifications are being prepared. For instance, the work may be hidden from view by being buried underground or between existing building walls. In such a case the contractor will usually include an additional sum in his bid as a contingency measure and, if the assumed contingency does not occur the City has been penalized. Work by City forces is at actual cost of performance.

(f) Specifications prepared by the City indicate the minimum quality of workmanship and materials acceptable to the City. From competitive necessity the contractor will usually interpret the specifications with the viewpoint that they represent the maximum quality to be furnished. This viewpoint frequently leads to conflicts of opinion between the City's inspectors and the Contractor. For example, where painting specifications require that "surfaces shall be properly prepared before painting," the successful bidder may claim that existing surfaces need less preparation than that required by the Inspector. There is no conflict of interest where City forces do the work.

(g) Certain types of building repair jobs, performed under contract, are relatively expensive because of the small number of contractors who are willing to bid on this type of work and then only if they are assured of receiving a relatively substantial profit. This is particularly true where more than one craft is involved in the work and it is necessary for the general contractor to subcontract portions of the work.

C - Additional Facilities Necessary for the Maintenance Yard

Additional facilities should be provided at the Public Works Maintenance Yard for purposes of centralizing activities, decreasing operating costs and advancing the effectiveness of services rendered by the maintenance and operating bureaus. As initial steps toward accomplishing these purposes, the old incinerator site was annexed to the Maintenance Yard; additional unimproved land was purchased on June 19, 1957 at Army and Kansas Streets at a cost of about $193,000 for 61,650 square feet of ground area and $150,000 has been appropriated for plans and improvements.

An additional appropriation in the approximate amount of $1,000,000 should be provided for:

(a) A local warehouse, so as to avoid extensive time now consumed in hauling supplies from the Purchaser's storehouse at 15th and Harrison Streets. Upon construction of the new warehouse, land presently used by this department near 15th and Harrison Streets and with a market valuation of approximately $80,500 can be released for other purposes.

(b) Additional truck-ports for recently purchased equipment.

(c) Alterations to present shop buildings in order to substantially increase the operating efficiencies of the Locksmith, Electrical and Cement Shop Divisions.

The present Maintenance Yard has a land area of about 6.8 acres and the building and site improvements have cost a total of about $650,000, exclusive of those improvements provided for the old incinerator plant years ago.

D - Inadequate Maintenance and Repair of Public Buildings

The Bureau of Building Repair maintains and repairs 293 public buildings having a total floor area of about 4,922,000 square feet and also maintains and repairs, to a limited degree, 29 rented buildings and spaces having a total floor area of about 174,000 square feet.

Appropriations for many of these buildings are inadequate to properly maintain and protect the City's investment. As a result there is a mounting backlog of needed work postponed from year to year. Costly replacement becomes necessary, in many cases, that could have been avoided by orderly preventive maintenance, if funds had been available for the purpose. Until recently, the department had no means to provide a completely coordinated survey and inspection of the physical condition of these buildings. On July 1, 1955, funds were provided for the employment of an "Engineer-Architect Team" for the purpose of accomplishing an effective preventive maintenance and repair program and with the objectives to:

(a) Insure that those concerned have such knowledge of the conditions of safety and preservation of all public buildings under jurisdiction of the Department of Public Works, as will enable appropriate action to be taken at the proper time.

(b) Avoid the extra expense of major repairs through closer attention to current maintenance.

(c) Provide detailed information for estimating funds for maintenance and repair work.

(d) Classify proposed work according to degree of urgency so that the budgets may be intelligently prepared.

(e) Provide technical consultation and assistance to occupying activities as to proper maintenance and repair of public buildings.

(f) Provide, through successive reports on all structures, a consecutive historical record of essential facts relating to maintenance and repair work and costs.

In about three more years this "Team" is scheduled to complete their initial over-all inspection and survey. From available information at this time, it appears that current unit costs to suitably maintain the City-owned buildings will vary between $0.10 per year per square foot of floor area for warehouse type structures to $0.50 for buildings such as at San Francisco Hospital. Exclusive of the San Francisco Hospital and the Laguna Honda Home, which since June 1954 have been receiving additional funds to overcome deferred maintenance, the cost of estimated proper maintenance and repair averages about $0.36 per square foot in comparison to an average of about $0.11 appropriated during the period from July 1953 to June 1957.

E - Deferred Replacement of Obsolete Equipment

The maintenance and operation bureaus are assigned 190 automotive vehicles and 139 specialized portable units, exclusive of 6 hired trucks and 10 rented trucks. There is no established policy for the orderly retirement of City-owned equipment. It has been the practice to approve equipment replacement only when it is obvious that an old unit is worn out. There then usually follows a period of from 10 to 17 months before funds are provided, purchases made and equipment delivered for use. If replacement of a unit is not approved, a full year elapses before it is again given consideration, unless interim action is taken by supplemental budget request. In the meantime, costly repairs are often made to necessarily keep the worn-out equipment in service until replaced by a new unit. In order to correct this costly procedure of retaining worn out units in service long after their economical useful life has ended, it is recommended that a replacement program be instituted based upon the age, mileage and useage of the equipment.

F - Insufficient Number of Standby Automotive Equipment

The practice of having almost no reserve equipment assigned to the maintenance and operating bureaus causes a substantial waste of time and effort, in some specific instances, during periods when the equipment breaks down or is in the shop for repairs.

The lack of stand-by equipment often requires reorganization of crews with attendant loss in work efficiency. As one specific example, the tractor-loader is a very essential unit to the economical operation of the Bureau of Street Repair. Only one unit is in service in the department. It was purchased at a cost of $5,446 and is normally assigned to a crew composed of 2 chauffeurs and a laborer using equipment consisting of the loader and 2 trucks. The cost of crew and equipment amounts to about $113 a day. During this year, the tractor-loader was in the shop for repairs on 18 occasions for periods of one hour to 4 days, amounting to about a total of 12 days. When the lay-up time was extensive the crew was assigned to other work, otherwise the time was mostly lost from productive endeavor. Furthermore, the lay-up of the tractor-loader produced a chain reaction in that it was necessary to divert a 6-man clean-up crew from other assignments and this, in turn, required curtailment or neglect of other work in order to recruit replacements for essential clean-up work. These shifts, required upon each lay-up of the tractor-loader, evaluate to well over $170 per day in productive loss to the City.

For efficient operation the maintenance and operation bureaus should be presently provided with at least the following reserve equipment: One tractor-loader at about $7,500 and 2 dump trucks at about $8,500 each for the Bureau of Street Repair; one sewer cleaning rig at about $4,000 for the Bureau of Sewer Repair and Sewage Treatment; and one motor-flusher at about $13,000 for the Bureau of Street Cleaning.

RAINFALL

Rainfall has considerable bearing upon the extent and nature of field operations during winter months. The annual rainfall for San Francisco, as recorded by the Federal Weather Bureau from July 1, 1956 to June 30, 1957, amounted to 14.01 inches as compared to a rainfall of 27.16 inches in 1955-56 and a norm of 20.51 inches. Monthly precipitation, in inches, was as follows:

July, 1956	trace	January, 1957	2.84
August	.01	February	3.58
September	.33	March	2.39
October	.11	April	1.09
November	.04	May	3.19
December	.37	June	.06

TABLE A
POSITIONS ALLOWED BY ANNUAL SALARY ORDINANCES AND AMENDMENTS FISCAL YEARS 1952-53 THROUGH 1956-57

	1952 1953	1953 1954	1954 1955	1955 1956	1956 1957
Bureau of Sewer Repair and Sewage Treatment					
Sewer Repair	130	123	123	124	129
Sewage and Waste Treatment	*	*	102	102	102
Pumping Stations	8	8	11	12	12
TOTALS	138	131	236	238	243

*Transferred December 3, 1954 to the Bureau of Sewer Repair without change in number of personnel.

	1952 1953	1953 1954	1954 1955	1955 1956	1956 1957
Bureau of Street Repair					
Street Repair (General)	131	151	148	144	151
Bridges and Tunnels	23	24	24	23	22
Interdepartmental Service	36	10	*	*	*
TOTALS	190	185	172	167	173

*Included in Street Repair (General).

	1952 1953	1953 1954	1954 1955	1955 1956	1956 1957
Bureau of Street Cleaning					
Street Cleaning	332	332	332	333	336
Streetside Planting	*	*	*	15	19
As Needed Service	25	25	25	25	25
TOTALS	357	357	357	373	380

*Transferred July 1, 1955 to Bureau of Street Cleaning

	1952 1953	1953 1954	1954 1955	1955 1956	1956 1957
Bureau of Building Repair					
Building Repair	157	166	175	186	187
Traffic Painting	*	21	21	21	21
Interdepartmental Service	155	130	134	134	138
TOTALS	312	319	330	341	346

*Transferred July 1, 1953 from Interdepartmental Service

	1952 1953	1953 1954	1954 1955	1955 1956	1956 1957
TOTAL FOR MAINTENANCE AND OPERATION	997	992	1,095	1,119	1,142

NOTE: Interdepartmental and As Needed Services are not established as continuing positions but are for services as required when funds are provided for the purpose involved.

TABLE B

PERSONNEL CHANGES

An increase of 23 permanent employments were provided during the year, as indicated below:

Bureau		Change
Sewer Repair and Sewage Treatment		
(a)	Addition of 5 Chauffeurs for assignment to new City trucks purchased to replace 5 hired trucks with drivers	5
Street Repair		
(a)	Addition of 1 Cement finisher	1
(b)	Addition of 1 laborer for assignment to new City truck purchased to replace one hired truck with driver	1
(c)	Addition of 5 Chauffeurs for assignment to new City trucks purchased to replace 5 hired trucks with drivers	5
(d)	Deletion of one Operating Engineer	-1
Street Cleaning		
(a)	Addition of one laborer	1
(b)	Addition of two Chauffeurs including one for assignment to new City truck purchased to replace one hired truck with driver	2
(c)	Addition of 3 gardeners	3
(d)	Addition of 1 sub-foreman gardener	1
Building Repair		
(a)	Addition of 1 Chauffeur for assignment to new City truck purchased to replace one hired truck with driver	1
(b)	Addition of 4 Interdepartmental employments (1 steam-fitter and 3 cement finishers)	4
	TOTAL NET INCREASE	23

TABLE C

SUMMARY OF EXPENDITURES

Bureau	Expenditure from Bureau's Budgeted Funds	Funds Expended from Other Sources	Total Expenditures
Building Repair	$2,543,058	$ 924,279	$3,467,337
Street Cleaning (incl. Streetside Planting)	1,984,399	51,967	2,036,366
Sewer Repair and Sewage Treatment	1,925,003	572	1,925,575
Street Repair	1,552,800*	90,519	1,643,319
TOTAL	$8,005,260	$1,067,337	$9,072,597
Less Expenditures made from Budgeted Funds and Reimbursed			192,581
TOTAL NET EXPENDITURE			$8,880,016

* Includes $66,039 of retirement charges applicable to other Special Road Improvement Fund Functions (Gas Tax).

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

B. Benas, Superintendent

The Bureau of Sewer Repair and Sewage Treatment maintains and repairs the sewerage system, operates and maintains sewage pumping stations and treatment plants, analyzes air samples for pollutants and regulates and controls industrial wastes discharged to sewers. Activities pertaining to the sewerage system and pumping stations are under the Sewer Repair Division. The treatment plants and control of industrial wastes discharged are under the Sewage and Waste Treatment Division. No major changes were made during the year in Bureau activities or responsibilities.

In addition, the Sewage Treatment Division gave advisory and technical service to other departments of the City as listed below:

Department of Public Health

On operation of sewage treatment plant at Hassler Health Home in San Mateo County.

Recreation and Park Department

On operation of sewage treatment plant in Golden Gate Park.

Sheriff's Department

On operation and improvements to sewage treatment plant at County Jail No. 2 in San Mateo County.

Public Utility Commission

On operation of sewage treatment plant at San Francisco International Airport in San Mateo County.

The appearance, operation and maintenance of sewage pumping stations were improved by continuing the policy, instituted in 1956, of having an operating engineer in charge of each of the three major sewerage districts.

The operating efficiency of sewer repair activities was increased by adding a mobile repair unit for side sewer construction, replacing an obsolete mounted compressor unit for main sewers and replacing hired vehicles and drivers by City owned service trucks.

Sludge facilities at the Southeast Sewage Treatment Plant were operated on a 5-day 24-hour schedule. This will be increased in 1957-58 to 7-day 24-hour operation because of the increase in quantity of sludge from increased flow.

Industrial waste activities were confined to industries where specific violations were indicated. A check of all industries on a scheduled basis will be delayed until additional personnel are authorized.

Budgeted employments for the fiscal year were 129 for Sewer Repair, 12 for Pumping Stations, and 102 for Sewage and Waste Treatment, totalling 243. These employments were supplemented by five hired chauffeurs for Sewer Repair and ten maintenance personnel for Sewage Treatment from other Bureaus and Departments.

On June 30, 1957 the following held supervisory positions in the Bureau:

Sewage Treatment Division

W.B. Jones	Senior Civil Engineer-Assistant Bureau Head
K. Fraschina	Superintendent, North Point Plant
J. Crafts	Superintendent, Southeast Plant
B. Martin	Superintendent, Richmond-Sunset Plant

Sewer Repair Division

E.R. Bunting	Assistant Superintendent
W.P. Juzix	Assistant Superintendent

SEWER REPAIR DIVISION

Organization

The Sewer Repair Division cleans sewers and catch basins, maintains and repairs main sewers and structures, installs and repairs side sewers, tests for explosive and other gases, and operates and maintains sewage pumping stations. Maintenance and repair problems are peculiar to the San Francisco system and cannot be compared directly to other communities because (a) nature of the material entering sewers, (b) construction and age of main and side sewers, (c) sandy soil in the westerly portion of the City and (d) topography.

There are over 800 miles of main sewers. Most of these are combined sewers handling both surface runoff and sanitary sewage. Separate sewers are located in part of the lower Market Street area and in other isolated areas. Main sewers range in size from 6 inch vitrified clay pipe to three-compartment reinforced concrete sewers with 7-1/2 foot by 10 foot compartments.

During rain, excess storm flow is diverted to the bay or ocean through 16 outfalls. At 13 locations pumping stations boost sanitary flow and some storm runoff to main interceptors.

Personnel

The 140 budgeted employees are assigned as follows:

General

2 Assistant Superintendents

Sewer Repair Section

3 General Foremen	10 Hod Carriers
1 Water Chemist	45 Cribbers
9 Chauffeurs	17 Sewer Cleaners
6 Brick Layers	35 Laborers

Pumping Station Section

1 Assistant Engineer, Electrical
3 Operating Engineers
8 Junior Operating Engineers

In addition, one Junior Engineer, Civil, and one Clerk-Typist are permanently assigned from other bureaus. Five hired drivers work permanently under contract.

All operations are supervised by the two Assistant Superintendents. The sewage pumping section is headed by the Assistant Electrical Engineer and the sewer maintenance and repair sections by the three General Foremen.

SEWER MAINTENANCE AND REPAIR

Maintenance and repair activities are separated into nine work units based on type of work and classification.

Table I shows work assigned each unit and personnel and equipment used.

Table II shows work distribution, total expenditures by work units and unit costs where applicable. Unit costs include general department overhead and prorated allowance for equipment.

Sewer Cleaning

Ninety percent of the time of the crews was spent cleaning sewers and ten percent on operations in connection with complaints and repairs. During the fiscal year 156,093 lineal feet of sewer was cleaned, mainly on scheduled operations in the Sunset, Outer Mission and North Point areas. Sewers are normally cleaned by buckets dragged between manholes. Other methods employed are manual cleaning for large sewers, flushing and rodding.

Eductor Operations

A total of 18,992 catch basins were cleaned during the regular working hours in continuation of the program of regular cleaning started in 1955 and described on Page 114 of the 1954-55 Annual Report.

Two eductors were assigned to night operation from May 15 to June 15, 1957 to clean catch basins in downtown areas inaccessible during the day because of heavy traffic or parked vehicles. A total of 528 catch basins were cleaned in the areas north of Market and west of the Embarcadero to Taylor Street and the Civic Center, and south of Market from the Embarcadero to Valencia Street and the Channel.

Eductors for night operation were specially equipped with flood lights, flashing red lights, reflectorized warning signs, barricades and traffic cones. Operating crews were required to wear red fluorescent safety vests and were given special instructions in night operation methods. Night operation will be scheduled yearly.

A two-reel Elgin Eductor, first of this type in the west, was placed in operation on August 3, 1956 to increase safety and efficiency by cleaning catch basins on both sides of one way streets while traveling in the direction of traffic. It was used primarily in downtown areas. This operation was so successful that another unit will be purchased as a replacement in the 1957-58 fiscal year.

Servicing Complaints

This section services complaints from the public and other sources, wets down main sewers and side sewer trenches, flushes pipe sewers which have become sluggish or temporarily plugged, and does all emergency work pertaining to the system. Four crews are on regular day shift and one crew on night shift. Weekend work is scheduled only during impending wet weather periods.

As shown on Table II approximately 54% of the time is spent on service calls and 46% on other work. During the year a total of 8,340 calls were made, 5,952 on complaints and 2,388 on other work.

The following tabulation shows the breakdown of work done by type of work and number and percent of calls.

	Calls			
Type of Work	Number		Percent	
Side Sewers				
Relieve	2,023		24.3	
Check - Trouble Inside Property	882		10.6	
Wet Down Backfill	242		2.9	
Check - Requires Repair	207		2.5	
Check - To Determine if Functioning	172	3,526	2.0	42.3
Main Sewers				
Check - Requires Repair	446		5.3	
Flush and Rod	441		5.3	
Examine	376		4.5	
Wet Down Backfill	183	1,446	2.2	17.3
Catch Basins and Manholes				
Replace Covers	257		3.1	
Flush	246		3.0	
Silence Noisy Covers	204		2.4	
Check - Requires Repair	61	768	0.7	9.2
Miscellaneous				
Service Lights and Barricades	1,095		13.0	
Investigate Seepage and Leaks	483		5.8	
Clean at Pumping Stations	477		5.7	
Miscellaneous Investigations	154		1.9	
Deliver Materials	121		1.5	
Not Classified	100		1.2	
Remove Deposits on Sidewalks	31	2,600	0.4	31.2

The bureau had contracted for hire of five vehicles and drivers for approximately fifteen years. This practice was discontinued on April 1, 1957 when City owned vehicles were placed in service. The composition of the crew was changed from one hired driver, one sewer cleaner and one laborer to one sewer cleaner and two laborers.

The Bureau designed a special truck body mounted on a one-ton chassis with a six cylinder engine adapted from the standard designs normally used for electric utility maintenance. Special compartments were provided to contain the tools and supplies most used and to make them quickly and conveniently available.

Repairing Main Pipe Sewers

One of the major activities is the repair of main pipe sewers, mainly vitrified clay. Breaks occur from scour, open joints, settlement or poor house connections. Scour is prevalent on streets with steep slopes serving previously undeveloped areas; open joints and settlement occur mainly in sewers installed a number of years ago and poor house connections result from installations by private contractors before regulations required installation by City forces.

In the 1956-57 fiscal year 7,694 linear feet of sewer were replaced at 526 locations.

Repairing of Brick Sewers and Structures

Repairs are continually required to maintain the 76 miles of brick sewers. Most deterioration results from failure of the lime mortar originally used and from natural scour.

Repairing and Installing Side Sewers

The side sewer from the building to the main sewer belongs to the property owner. By City Ordinance all installation and repair work under City Streets on side sewer connections must be performed by this Bureau except where side sewer construction is included with main sewer construction under public contract. Before any work is started the property owner deposits with the Central Permit Bureau the estimated cost for constructing the side sewer from the curb and connecting to the main sewer. Final payment covers only actual costs.

Gas Detection Survey

This section tests sewer manholes, pumping stations and treatment plants, and other miscellaneous structures for explosive gas, carbon monoxide, hydrogen sulphide, and oxygen deficiency; checks for specific industrial wastes in sewers; assists in safety training and checks manholes and sewers for condition. Natural gas leaks are reported to the gas utility company and testing is continued until the condition is corrected. Clogged sewers, loose bricks, and sludge deposits in manholes are reported to other sections.

Tests, testing methods, and equipment used are described in detail on Pages 92-95 of the 1952-53 Annual Report.

During the fiscal year 7,237 manholes were tested; 167 had concentrations of methane below the limits considered explosive (concentrations 0.15% to 1% methane); 81 contained methane in concentrations considered dangerous (1% to 15% methane); 6 manholes contained carbon monoxide and 6 manholes were deficient in oxygen.

The gas detection unit was on night operation between May 16th and June 14th, 1957 to survey downtown areas with heavy daytime traffic. During this period 1,258 manholes were tested, of which 8 contained dangerous concentration of methane. Night testing service will be scheduled yearly.

No chemist was available between July 1, to August 31, 1956 and January 15, to February 18, 1957.

Repairing and Maintaining Outfall Structures

Outfall structures with tide gates, used for discharge of excess storm flow and preventing tidal backup, are checked annually. Repairs and painting, if required, are done mainly by the contractual services of other bureaus or departments.

Miscellaneous Work

This work unit covers a number of miscellaneous functions such as yard service, placing barricades and warning lights and other work not regularly scheduled or normally a part of the work of other units.

Studies and Improvements

Field operations are continually being studied to determine what manual operations might be performed better mechanically.

Checking the work accomplished by (a) analyzing work reports, (b) comparing unit costs by periods and (c) field investigating, increased the work done and lowered unit costs.

Mapping of field operations to include catch basin cleaning, sewers cleaned, condition of brick sewers and sewers requiring replacement, continued.

Studies on sewer rodding indicated that a self-contained powered trailer-mounted machine with provision for enclosing the rod is safer and better adapted for use in downtown areas than the small portable unit now in use. Additional funds were obtained for purchase of a unit of this type, scheduled for delivery in July 1957.

SEWAGE PUMPING STATIONS

General

This section operates and maintains thirteen sewage pumping stations whose primary purpose is to boost sanitary flow and some storm water run-off to main interceptors leading to treatment plants. Descriptive information for each of the sewage pumping stations may be found in the Annual Reports for 1952-1953, Pages 86 to 92 inclusive; 1953-1954, Page 96; 1954-1955, Pages 116 and 117 and 1955-1956, Page 111.

At present, the Yosemite Station is under construction and is expected to be completed August 1, 1957.

Improvements

Under contracts by the Bureau of Engineering:

Hunters Point Station revised to accommodate improvements in Hunters Point Boulevard and Hudson Avenue area.

(a) Hudson Avenue extended at street level.

(b) Retaining walls constructed for yard area.

(c) Separate sand sump eliminated.

(d) Means provided for removal of sand and grit from main sump at street level using built-in ejector.

La Place Canyon Station dismantled as extension of Glen Park sewer to Portola Drive provided gravity flow.

Replaced damaged manually operated outfall gate with electrically controlled gate, to prevent inflow of tide waters and installed machinery access hatch at Marina Station.

Proposed Improvements

Marina Station:

Replacement of diversion gate to prevent flooding station in event of damage to internal piping and revision of ventilating system.

Sea Cliff No. 1 Station:

Construction of new station on north side of Sea Cliff Avenue to replace existing station, or

Revision of existing station to provide access for equipment repairs and a new overflow storage basin to prevent pollution of Phelan Beach.

Sea Cliff No. 2 Station:

Installation of automatic controls to place station in operation after rains or when station is unattended.

Vicente Street Station:

Revision of existing sump to prevent deposits of grit and sand.

Personnel

No change during the fiscal year. The twelve budgeted employees are assigned as follows:

1 Assistant I Engineer, Electrical, in charge

North Point Sewerage District	Pump Station
1 Operating Engineer	Commercial
5 Junior Operating Engineers	Hyde Marina
Richmond-Sunset Sewerage District	Pump Station
1 Operating Engineer	Fulton
2 Junior Operating Engineers	Lakeshore Park Merced Pinelake Sea Cliff No. 1 Sea Cliff No. 2 Vicente
Southeast Sewerage District	Pump Station
1 Operating Engineer	Fitzgerald
1 Junior Operating Engineer	Hunters Point Mariposa

Total Salaries	$69,843
Electric Power	15,922
Maintenance	4,859
Supplies	2,109
Equipment	815
TOTAL EXPENDITURES	$93,548

Table III shows individual expenditures and unit cost date of pumping stations.

SEWAGE AND WASTE TREATMENT DIVISION

General

The Sewage and Waste Treatment Division operates the North Point, Richmond-Sunset and Southeast Sewage Treatment Plants and advises on the operation of sewage treatment facilities under the jurisdiction of other City departments. Other than for limited shutdowns for construction or repairs, the three plants operated continuously during the fiscal year treating sewage from all parts of the City except limited areas along the bay shore. The unserved areas will be connected to the plants upon completion of the additional collecting sewers and pumping stations now under construction or planned for the future.

On February 4, 1957 the flow from the U.S. Naval Shipyard at Hunters Point became tributary to the Southeast plant on a contractual basis at the rate of $35 per million gallons treated. The area involved is approximately 400 acres and the present flow from this source is about 2.1 million gallons daily.

Personnel

There was no change in the total number of Division personnel during the year. The following table shows distribution of plant personnel as of June 30, 1957, exclusive of the Senior Engineer in charge of the Division and the Industrial Waste Engineer.

Classification	North Point	Richmond Sunset	Southeast
Superintendent	1	1	1
Chemist	1	0	2
Water Chemist	2	2	2
Clerk-Stenographer	1	1	1
Chief Operating Engineer	1	1	1
Operating Engineer	6	6	9
Junior Operating Engineer	15	5	25
Janitor	1	0	1
Laborer	4	3	5
Truck Driver	1	1	0
TOTALS	33	20	47

Bacteriological work has been stepped up at the Richmond-Sunset laboratory. This has been made necessary by the increased use of Phelan Beach and other shore areas for recreation purposes. Major bacteriological work has continued at the North Point laboratory. Engineering design for improvements is performed by the Bureau of Engineering. Major repairs and maintenance requiring the services of specialized crafts are done by other bureaus of the Department and by the Purchaser's shops. The Recreation and Park Department maintains landscaping at all plants with transferred funds.

SEWAGE TREATMENT METHODS

Each plant provides primary treatment for the removal of oil, grease, floating material, grit and settleable solids. Grit from all plants and screenings from the North Point and Southeast plants are hauled by truck to the garbage fill south of the county line. Screenings from the Richmond-Sunset plant are incinerated. At the Richmond-Sunset plant, sludge is digested in two-stage digestion, elutriated and dewatered by vacuum filtration and the filter cake is hauled to the City parks for use as a soil conditioner. Raw sludge collected at the North Point plant is pumped to the Southeast plant where it is treated together with the sludge generated at the Southeast plant. Sludge treatment at Southeast consists of thickening, two-stage digestion, elutriation, vacuum filtration and flash drying. A small quantity of the dried sludge is used as a soil conditioner by other City departments and the balance is sold under contract as surplus.

Chlorination is practiced at all three plants, being used for disinfection, or the destruction of disease producing organisms to protect water supplies, bathing beaches and shellfish growing areas; to control odors; to control undesirable growths in pipe lines and conduits; to limit corrosion of structures and paint by hydrogen sulphide; to reduce biochemical oxygen demand; to aid chemical coagulation of sewage solids; and for a number of other useful purposes. Chlorine is applied at the plant entrance (pre-chlorination) for odor control, after sedimentation (post-chlorination) for bacterial disinfection, and at the point of diversion for auxiliary water supply.

Liquid chlorine is delivered to the North Point and Southeast plants in 30 ton tank cars and is stored in stationary pressure tanks. It is delivered to the Richmond-Sunset plant in one ton cylinders from which it is directly drawn and evaporated in electrically heated evaporators. Thence it is fed to the point of application in accurately controlled quantities by means of chlorinators of the air-operated, visible vacuum, solution feed type. The chlorinators are automatically controlled to feed chlorine at a rate proportional to the sewage flow as measured by the influent and effluent meters.

Chlorine in both the liquid and gaseous form is an extremely dangerous commodity and every known reasonable precaution is taken to protect employees and the public from the hazard of chlorine leaks. The two 50-ton chlorine storage tanks at the North Point plant, having been in service for five years, were inspected for the first time and were found to be in perfect condition.

TREATMENT PLANT OPERATION

The following table summarizes data on flows, material removed, chemicals added and products handled and power and gas purchased for the three plants. Changes in flow over a 5 year period are shown in the accompanying diagram.

SUMMARY OF TREATMENT PLANT OPERATIONS

Fiscal Year 1956-57

	North Point	Richmond-Sunset	Southeast
Sewage Flow, million gallons			
Total (a)	16,136	5,066	6,259
Max. day, wet weather	81.2	18.4(b)	28.8(b)
Max. day, dry weather	47.1	17.5	25.3
Average Day	44.2	13.9	17.3
Max. rate, wet weather	141	30 (b)	34 (b)
Max. rate, dry weather	68	25	31
Screenings, cu. ft.			
Total	28,229	10,084	38,812
Max. day	260	56	304
Per million gallons	1.7	2.0	6.2
Grit, cu. ft.			
Total	56,186	37,287	56,262
Max. day	945	783	1,500
Per million gallons	3.5	7.4	9.0
Chlorination, pounds (c)			
Pre	439,730	101,910	46,120
Post	763,890	416,830	81,570
Process water (effluent)	6,080		
Total	1,209,700	518,740	127,690
Per million gallons (dry weather)	93	120	147
Sludge Solids, M pounds (dry)			
From sedimentation	34,080		23,524 (d)
To digesters (e)		8,354	43,028
Filter Cake		1,997	12,602
Dried Sludge			8,900 (f)
Ferric Chloride			
Total pounds		83,950	606,900
% used based on filter cake solids		4.20	4.82
Gas Production, M cu. ft.			
Total		41,530 (g)	231,000
Average day		114 (g)	633
Power and Gas Purchased			
Power, Total M kwh	5,491.2	1,783.8	4,111.6(h)
Power, average month M kwh	457.6	148.7	342.6
Nat. gas, total C. cu. ft.	93,178	11,850	137,673
Nat. gas, average month C cu.ft.	7,765	988	11,473
Hauling			
Trips, grit and screenings	536		298
Trips, grit and filter cake		796	
Trips, dried sludge			84 (i)

NOTES

(a) For 365 days of operation at North Point; 365 days of operation at Richmond-Sunset; 362 days of operation at Southeast.

(b) Flow restricted during storms to avoid overloading grit handling facilities.

(c) Pre-chlorination continuous at North Point and Richmond-Sunset. Post-chlorination at North Point March through November and during extended periods of dry weather in winter months. Post-chlorination continuous at Richmond-Sunset except during storms. Pre-chlorination for 18.6 days and post-chlorination for 33.7 days during year at Southeast. Discontinued in September due to extremely high chlorine demand of sewage.

(d) Includes recirculating load from raw sludge thickening and digested sludge elutriation overflows.

(e) From raw sludge thickening.

(f) Low yield from drying (only 71%) caused by poor condition of air-locks due to maintenance deferred for lack of funds. The lost solids were dissipated from the stack in the form of dust.

(g) Estimated from volatile solids in raw sludge to digesters and meter readings during the last 3 months of the fiscal year.

(h) Reduced power requirements caused principally by: (a) one entire sedimentation building being out of service for about 5 months due to equipment breakdown. Delay in repairs caused by lack of maintenance funds; (b) discontinuing chlorination; (c) improved efficiency of sewage lift pumping by alteration of switching program.

(i) Hauling 421.25 tons used by City. Contractor hauled the 4,028.85 tons sold to him at $1.10 per ton.

RESULTS OF OPERATION

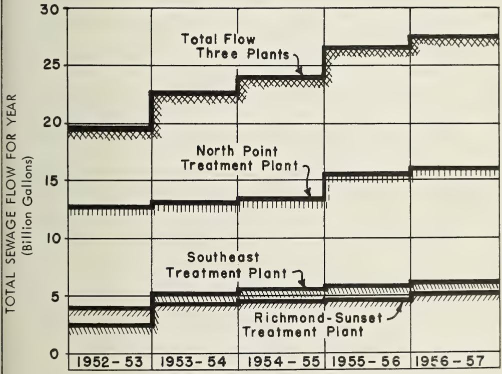
Bay and ocean waters in the vicinity of the treatment plant outfalls and at nearby beaches remained in excellent condition during the fiscal year. Waters are safe for bathing along the ocean beach and nearby north shore beaches, and at Aquatic Park at all times except when storm overflow occurs during the winter season. Bay waters in the vicinity of Islais Creek continued to meet State Regional Water Pollution Control Board requirements.

COST OF OPERATION

Total expenditure for the fiscal year was $943,023. The cost was distributed as follows:

Personal services	$627,557
Heat, Light and Power	121,822
Contractual Services	46,293
Materials and Supplies	144,552
Equipment	2,799

Based on a connected population of 760,000 the cost of operation was approximately $1.24 per capita.



SEWAGE FLOW AT TREATMENT PLANTS
JULY 1952 to JUNE 1957

IMPROVEMENTS

The following major improvements were made at the treatment plants during the fiscal year. Work done under contract by the Bureau of Engineering is indicated by the symbol (E).

North Point Plant:

Machinery guards required by the State Division of Industrial Safety were completed.

Two sump pumps were installed in the Embarcadero spillway control structure. (E)

The skimming troughs in the sedimentation tanks were lowered. (E)

Rain guard louvers were installed at supply fan filters.

Supply fan room walls in the Sedimentation Buildings were replaced with concrete block. (E)

Richmond-Sunset Plant:

A new redwood seeding tank was installed on the digester control house.

A new sludge transfer pump and a new supernatant recirculating pump was installed. (E)

The capacity of the by-pass channel for the Richmond flow was increased and two new sluice gates were installed for controlling the Richmond flow. (E)

A venturi-type gas meter was installed in lieu of the former bellows-type and two boosters were installed to increase gas pressure. (E)

Southeast Plant:

The drainage system at the digesters was separated from the supernatant overflow system to prevent flooding. (E)

Landscape areas which could not be properly maintained with existing personnel were paved. (E)

A lawn sprinkling system was installed. (E)

SPECIAL STUDIES AND INVESTIGATIONS

1. Completed:

Development of detection system to identify source of water leaks.

Field tests and advisory service in connection with the placing in operation of the new Airport treatment plant.

Surveys to locate sources of salt water in Southeast collecting system.

Revision of system of operation for explosive gas detection unit.

Investigation of screening method for removal of non-digestible material from digested sludge.

2. In Progress:

Optimum rate of pre-chlorination for odor control.

Effect of varying the rate of preaeration before sedimentation on sulfides, pH, and dissolved oxygen in effluent, on chlorine demand and on removal of grease, suspended solids and 5-day B.O.D.

The comparison of dacron, dynel and wool as a blanket material for vacuum filters.

Studies of the variation in chlorine demand at the Southeast plant and the causes thereof.

Evaluation of the present sludge handling system at the Southeast plant and the study of alternate systems.

Study of alternate methods of handling screenings, grit and chlorine at the Southeast plant.

3. Continuing:

Chemical and bacteriological survey of shore waters.

Analysis of industrial wastes.

Source identification in leak and seepage complaints received by the Bureau.

4. Air Pollution:

The Richmond-Sunset Plant in cooperation with the Bureau of Air Sanitation, California State Department of Public Health, is continuing to collect detailed records of wind direction and velocity and oxident values comprising a base level of air pollutants reaching San Francisco. Data collected is supplied to the Bay Area Air Pollution Control District. The program has been expanded to include the entire City through a system of random sampling in order that conditions which occur in the several separate and distinct climatological and topographical areas that make up San Francisco may be evaluated. The plant superintendent continued to act as advisor to City Supervisors William C. Blake and Clarissa S. McMahon, Board members of the Bay Area Air Pollution Control District.

INDUSTRIAL WASTES

The program of sampling and analysis of industrial wastes continued during the year with field investigations ordinarily limited to checking specific complaints and ordinance violations. Samples collected were analyzed by the treatment plant laboratories. Affected industries generally cooperated readily in improving facilities and making changes in their plant operations. The rendering plants and animal casing establishments installed grease clarifiers and the meat packing group started a program for improving the quality of their plant waste waters entering the City sewers. The San Francisco Naval Shipyard completed an extensive sewerage collection system eliminating shoreline pollution at Hunters Point and installed an acid neutralizing system for their battery acid wastes. Surveys and reports regarding two tanneries were completed and requests were made for the installation of necessary facilities to treat their plant wastes.

Survey of the Southeast Drainage Area investigating salt water entering the sewage treatment plant through infiltration or from plant cooling waters was completed.

A program for the investigation of oil and gasoline service stations, dry cleaning establishments, bulk oil storage plants and car and truck steam cleaning establishments was started.

Testing for the approval of Domestic and Commerical Type Garbage Grinders for their compliance with Ordinance 7425 was conducted by the Industrial Waste Engineer at the Southeast Plant.

TWO REEL EDUCTOR CLEANING CATCH BASINS
AT INTERSECTION OF ONE WAY STREETS

SPECIAL UTILITY BODY SERVICE TRUCK
LEAVING ARMY STREET YARD ON ROUTINE ASSIGNMENT

TABLE I
WORK UNITS, CREWS AND EQUIPMENT
SEWER REPAIR DIVISION

WORK UNIT	FUNCTION	CREWS	EQUIPMENT
1	SEWER CLEANING Clean main sewers. Misc. cleaning at pumping and treatment plants and other work	6 crews of 2 Sewer Cleaners 1 Laborer 1 hired Chauffeur	6 1½ ton trucks with tuggers, hoists, booms and cables. 1 hired material truck
2	EDUCTOR OPERATIONS Clean catch basins, Pump down sumps, Wet-downs, misc. work	8 crews of 1 Chauffeur 2 Laborers	8 Eductors 2 Standby
3	SERVICING COMPLAINTS Service complaints Flush sewers Miscellaneous work	5 crews of 1 Sewer Cleaner 2 Laborers	5 service trucks with utility bodies
4	REPAIRING MAIN PIPE SEWERS	11 crews of 2 Cribbers 4 hired Chauffeurs Bricklayers lay pipe as needed	Air compressor and tools Miscellaneous tools 4 hired material trucks (for Work Units 4, 5 and 6)
5	REPAIRING BRICK SEWERS, BUILDING AND REPAIRING STRUCTURES	4 crews of 1 Bricklayer 2 Hodcarriers 2 crews of 1 Bricklayer 1 Hodcarrier	Bricklayers and miscellaneous tools
6	REPAIRING AND INSTALLING SIDE SEWERS	6 or more crews of 2 Cribbers as required	2 mobile trucks with mounted air compressors Miscellaneous tools

TABLE I - Continued

WORK UNIT	FUNCTION	CREWS	EQUIPMENT
7	GAS DETECTION SURVEY Test manholes for explosive and other gases, Miscellaneous testing	1 crew of 1 Water Chemist 1 Laborer	1 Route Van Gas detection equipment
8	REPAIRING AND MAINTAINING OUTFALL STRUCTURES	None regularly assigned Work mainly by contractural services by others	None regularly assigned
9	MISCELLANEOUS WORK NOT REGULARLY SCHEDULED OR FORSEEN	None regularly assigned	None regularly assigned

TABLE II
SHOWING WORK DISTRIBUTION AND COSTS
SEWER REPAIR DIVISION

Work Unit		Per Cent			Totals		Cost Per Unit
1	SEWER CLEANING	90	Cleaning Sewers	$114,823		156,093 lin.ft. cleaned	$ 0.74
		10	Other Work	12,421	$127,244		
2	EDUCTOR OPERATIONS	76	Cleaning C/B's	142,260		19,541 C/B's cleaned	7.28
		24	Other work	43,941	186,201		
3	SERVICING COMPLAINTS	54	Servicing complaints	66,364		5,952 complaints	11.15
		46	Other work	56,761	123,125		
4	REPAIRING MAIN PIPE SEWERS	100	Repairing sewers	206,554	206,554	7,694 lin. ft. at 526 locations	26.85
5	REPAIRING BRICK SEWERS	67	Repairing brick sewers	91,292		14,703 lin.ft. repaired	6.21
		8	Repairing basins	10,866		224 Basins repaired	48.51
	BUILDING AND REPAIRING STRUCTURES	9	Repairing manholes	12,471		252 Manholes repaired	49.49
		8	Building basins	10,484		17 Basins built	616.69
		7	Building manholes	9,708		18 Manholes built	539.35
		1	Repairing concrete sewers	1,264	136,085	7 Locations	180.60
6	REPAIRING AND INSTALLING SIDE SEWERS	76	Installations	102,914		368 Installed S/S	280.00
		21	Repairs	28,191		130 Repairs	216.00
		3	Connections	3,292	134,397	37 Connections	89.00
7	GAS DETECTION SURVEY	59	Testing Manholes	6,646		7,327 Manholes tested	0.91
		41	Misc. tests and other work	4,573	11,219		
8	MAINTAINING AND REPAIRING OUTFALL STRUCTURES	100	Repairing and maintaining outfall structures	572	572		Not Applicable
9	MISC. WORK NOT REGULARLY SCHEDULED OR FORSEEN			39,077	39,077		Not Applicable
	TOTAL FOR WORK UNITS 1 TO 5 AND 7 TO 9			$830,097			
	TOTAL FOR WORK UNIT 6			134,397			
	GRAND TOTAL				$964,494		

NOTES: C/B = Catchbasin M/H = Manhole S/S = Side Sewer (Side Sewer Funds paid by property owners)

TABLE III
SEWAGE PUMPING STATIONS
1956-1957

Location	Drainage Area Acres	M.G. Pumped	Static Head in Feet	UNIT COST PER M.G. PUMPED PER						EXPENDITURES						REMARKS
					Contractual						Contractual					
				Salaries	Mtc'e.	Power and Light	Materials and Supplies	Equipment	TOTAL	Salaries	Mtc'e.	Power and Light	Materials and Supplies	Equipment	TOTAL	
General	-	-	-	$ 1.93	$ .19	$ -	$ .06	-	$ 2.18	$ 5,923.56	$ 583.65	$ -	$ 164.17	-	$ 6,671.38	
Commercial	93	301	20	66.43	.59	3.25	.46	-	70.73	19,991.27	179.29	977.86	141.16	-	21,289.58	
Fitzgerald	30	8	48	260.72	10.57	23.58	17.07	-	311.94	2,083.86	82.93	188.64	140.12	-	2,495.55	
Fulton Street	82	38	56	50.61	1.60	16.04	2.46	-	70.71	1,923.29	61.01	609.39	93.24	-	2,686.93	
Hunters Point	90	63	34	35.49	1.61	4.68	1.22	-	43.00	2,235.85	101.59	292.00	79.35	-	2,708.79	Station out of service for reconstruction. Contract 12-4-56 to 4-26-57.
Hyde Street	14	34	29	55.99	22.18	4.17	3.03	-	85.37	1,903.57	753.99	142.04	103.02	-	2,902.62	
Lakeshore	152	115	96	17.75	4.44	9.35	.29	-	31.83	2,041.89	511.39	1,075.20	31.69	-	3,660.17	
La Place Canyon	40	4	59	127.37	4.13	10.57	5.32	-	147.39	509.49	16.52	42.30	21.23	-	589.54	Station dismantled 9-21-56.
Marina	1,125	1,872	38	7.81	.47	3,28	.16	-	11.72	14,628.35	878.73	6,146.92	287.23	-	21,941.23	
Mariposa	150	253	44	8.76	.89	5.47	.76	-	15.88	2,216.60	225.79	1,379.20	194.91	-	4,016.50	
Park Merced	212	189	123	11.94	2.96	14.71	1.05	-	30.66	2,256.39	559.27	2,778.65	199.66	-	5,793.97	
Pinelake	3	3	61	638.12	15.61	63.76	29.51	-	747.00	1,914.40	46.01	190.80	89.79	-	2,241.00	
Sea Cliff No. 1	4	7	49	282.02	67.62	6.77	13.13	-	369.54	1,974.12	473.39	47.44	91.86	-	2,586.81	
Sea Cliff No. 2	83	93	94	79.81	2.51	15.89	2.68	-	100.89	7,422.62	234.28	1,478.40	247.04	-	9,382.34	
Vicente Street	52	95	56	20.96	1.37	6.05	2.34	-	30.72	1,991.57	129.55	573.60	224.09	-	2,918.81	
Yosemite Avenue	-	-	-	.27	-	-	-	-	.27	826.14	21.42	-	-	-	847.56	Salary and mileage charges during construction of new station.
TOTALS	-	3,066		$22.78	$ 1.58	$ 5.19	$ .69	-	$ 30.25	$69,842.97	$4,858.81	$15,922.44	$2,108.56	-	$92,732.78	

BUREAU OF STREET REPAIR

F.D. Brown, Superintendent

FUNCTIONS

Routine work includes the maintenance and repair of streets, gutters, curbs, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences; the maintenance of City dumps; the maintenance and operation of lift bridges and a tunnel.

Work ordered by the Director includes traffic channelization, the maintenance of planted areas in streets, and emergency work for the protection of the City and/or the public.

Work performed for other departments or bureaus includes the repair of pavement in Municipal Railway track areas, the repaving of trenches opened by the Bureau of Sewer Repair for the installation or repair of side sewers, the repair of state highways within the City, and the repair of pavements in school yards and in the yards of other City institutions.

The City's charter provides that work on any one job shall not exceed a cost of $2,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalks in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

Activities are further limited by state law governing the expenditures of monies from which the bureau is financed.

More detailed description of certain functions will be found elsewhere in this report and in previous reports as follows:

Heater-Planer Operation	- This report
Resurfacing	- This report
Curb Resetting and Replacing	- Report for year ending June 30, 1956
Mud-Jacking	- Report for year ending June 30, 1956
Municipal Asphalt Plant	- Report for year ending June 30, 1955
Machine Resurfacing	- Report for year ending June 30, 1955
Bridges	- Report for year ending June 30, 1954
Tunnel Lighting	- Report for year ending June 30, 1954
Tunnel Cleaning	- Report for year ending June 30, 1954
Source of Funds	- Report for year ending June 30, 1953
Tunnel Ventilation	- Report for year ending June 30, 1953

ORGANIZATION

Employments in the bureau, their grouping into crews and the division of supervision were as shown in a tabulation which is a part of this report.

Various obstacles have prevented the organizing of an additional asphalt repair crew which was proposed during the previous year. It is hoped that such a crew can be put into service soon.

During the year, one Cement Finisher was added to the force to replace a Paver who retired during the previous year. As explained in a previous report, Paver's work has become obsolete.

Also, during the year, the bureau dispensed with the services of six hired trucks and replaced them with City owned trucks. One laborer and five chauffeurs were added to the force on this account.

One position of Granite Cutter remained unfilled throughout the year. This position will be deleted.

Operations are often hampered for want of an equipment operator. Only four engineers, Hoisting and Portable Engines, are provided by salary ordinance. None can be spared from regular duties unless the crew to which he is assigned is put on work other than that for which it is organized. It is difficult, and sometimes impossible, to secure the services of a temporary operator. Consequently, a considerable amount of work must be done by hand that could be done more efficiently by machine; a considerable amount of heater-planing must be neglected. No adjustment in the organization would be necessary to take full advantage of the full time service of a fifth engineer; no additional employments or new equipment would be required.

SUPERVISION

No change has been made in the Bureau's supervisory force which is composed of a superintendent and three general foremen. The foreman of the asphalt plant and the chief operating engineer in charge of bridges and tunnel report directly to the superintendent. Each general foreman directly supervises a division of the Bureau's street repair force.

As stated in previous reports, an assistant superintendent is a definite need and an additional general foreman could undoubtedly increase the amount of work performed considerably.

EQUIPMENT

New equipment procured during the year consists of trench covers, concrete saw, a dump truck, five flat bed trucks with six-man cabs and one three-fourths ton pickup truck.

The concrete saw is a Felker Model 200, with 13-1/2 H.P. gasoline engine, equipped with self propelling unit. This unit has been found to be much more satisfactory than a smaller, push type model that has been in service for the past six years.

The five flat bed trucks are International Harvester Co., Model S152, 12,500 G.V.W., with Orrville six-man cabs and special flat beds. These trucks were purchased to replace trucks previously hired and will be used to transport asphalt repair crews, tools, tool heaters and asphalt kettles.

The pickup truck is a Ford three-quarter ton and was purchased to replace a truck previously hired. It will be used for the tending of lights and barricades, the servicing of equipment left in the field at night and for miscellaneous errands.

Equipment replacements consist of barricades, five pavement breakers, one compressor truck with dump body, two dump trucks and one pickup truck.

The compressor truck with dump body is an innovation in this Bureau. It is an International Harvester Co., Model S-152 (16,000 G.V.W.) with two cubic yard dump body and compressor space between body and cab. The compressor used is a Schramm Model 125 Pneumapower (125 c.f.m.) which is only eighty-two inches long and is mounted transversely. This arrangement permits the compressor crew to make much of its own cleanup and it is no longer necessary to always dispatch a six man cleanup crew for the purpose.

MUNICIPAL ASPHALT PLANT

The Municipal Asphalt Plant functioned as anticipated, with the exception of the asphalt transfer pump.

The asphalt transfer pump feeds the hot, liquid asphalt from the weigh bucket to the mixer spray line. This pump failed on four occasions. No reason could be attributed other than the possibility of asphalt carbonizing, flaking and wedging in the cast iron rotor teeth. A steam jacketed pump, with steel rotor, was installed February 16, 1957, and to date, has functioned trouble free.

Other failures consisted of vibrating screen drive shaft bearings and a traction wheel at the top of the hot elevator.

The plant was out of service one day for each asphalt pump failure and two days because of the traction wheel failure; production was limited for four days because of the failure of the vibrating screen drive shaft bearings.

Normal maintenance and repair such as replacing or hard facing mixer tips and arms, cleaning asphalt distributor system and cleaning dust collector system were performed during slack periods or on Saturdays.

Asphalt Production

When the present asphalt plant was planned it was agreed that an annual production of 50,000 tons would permit a reasonable unit cost but would not deprive private industry of too great a volume of business. That quantity has been our goal.

Mixtures produced, and their composition, were as follows:

	MIXTURES PRODUCED		COMPOSITION - %			
Mix Designation	Tons	Asphalt	#6	5/16"	5/8"	1¼"
Surface	3,697	8½	91½			
School	4,876	7	60	33		
Topeka	8,135	6	45	25	24	
Spreader	32,411	5½	40	25	17½	12
Binder	1,033	3½	21	28	22½	25
Cold Mixtures	62	6*	35	28	31	
TOTAL PRODUCED	50,214					

* Fuel Oil, Pacific Specification 300.

Aggregates were screened into the four "hot" bins from a combination of Antioch sand, coarse graded sand and three sizes of washed gravel. Asphalt used was 50-60 penetration, paving grade.

Production during the previous year was 49,946 tons.

Worked Performed

Work performed on Major and Secondary streets during 1956-1957 included the following major and more interesting functions:

	Unit	Quantity	Total Cost	Unit Cost
Asphalt Resurfacing, Hand				
Asphalt Paving	Sq.Ft.	302,286	$ 38,342	$ .127
	Ton	2,866		13.38
Reset Castings	Each	2	94	47.00
Total	Sq. Ft.	302,286	$ 38,436	.127
(105.5 Sq.Ft. per ton)	Ton	2,866		13.41
Asphalt Resurfacing, Machine				
Asphalt Paving	Sq. Ft.	4,869,263	$253,545	$ .052
	Ton	35,205		7.20
Reset Castings	Each	358	16,178	45.19
Total	Sq. Ft.	4,869,263	$269,723	.055
(138.3 Sq. Ft. per ton)	Ton	35,205		7.66
Asphalt Patching				
Compressor Work	Sq. Ft.	274,503	$ 28,936	$ .105
Asphalt Paving	Sq. Ft.	1,104,612	232,901	.211
	Ton	8,538		27.28
Cleanup			52,672	
Total	Sq. Ft.	1,104,612	$314,509	.285
	Ton	8,538		36.84
Curb Reset and Replaced				
Compressor Work	Lin. Ft.	26,600	$ 22,977	$ .864
Granite - Reset	Lin. Ft.	11,148	11,405	1.023
Replaced	Lin. Ft.	1,963	3,926	2.000
Concrete- Reset	Lin. Ft.	11,886	10,209	.859
Replaced	Lin. Ft.	1,427	3,049	2.137
Pavement Asphalt	Sq. Ft.	19,238	14,713	.765
Concrete	Sq. Ft.	155	174	1.123
Sidewalk	Sq. Ft.	31,804	41,330	1.300
Cleanup	Lin. Ft.	26,424	37,315	1.412
Total	Lin. Ft.	26,424	$145,098	5.451
Concrete Curb Repair			$ 10,615	
Curb Yard				
Redress Grainte Curb	Lin. Ft.	6,265	$ 12,296	$ 1.96
Sort, Move, etc.			3,738	
Total			$ 16,034	

	Unit	Quantity	Total Cost	Unit Cost
Crack Sealing				
Sealing	Lin. Ft.	1,964,608	$110,122	$ .056
Cleanup			30,487	
Total		1,964,608	$140,609	.072
Surface Sealing	Sq. Ft.	48,439	$ 4,720	$ .097
Manhole Castings Reset	Each	88	$ 3,658	$41.57
Concrete Pavement Repaired	Sq. Ft.	4,809	$ 8,516	$ 1.77
Sidewalk Reconstructed	Sq. Ft.	17,334	$ 25,296	$ 1.46
Traffic Stripes Removed				
Burn	Lin. Ft.	9,385	$ 1,935	$ .206
Sandblast	Lin. Ft.	255	174	.682
Total	Lin. Ft.	9,640	$ 2,109	$ .219
Mud-Jacking			$ 14,769	
Slide and Debris Cleanup			$ 24,105	

Work on State Highways accounted for an expenditure of $17,062. Major work consisted of 26,019 square feet of asphaltic pavement repair, 352 square feet of concrete pavement repair, and extensive heater-planing.

Work for other Bureaus and Departments accounted for an expenditure of $73,370. The major portion of the work consisted of repaving 20,306 square feet where trenches had been opened for the installation or repair of sidesewers, the resurfacing or repair of 73,050 square feet of asphaltic pavement and the repair of 3,159 square feet of concrete pavement. Other work included the construction of traffic channels, the hauling of records for various departments, the furnishing of labor for various purposes and the furnishing of several other varied services.

HEATER-PLANER OPERATION

Heater-planing is the process of removing asphaltic pavement by heating and scraping, in one operation, by a machine especially designed for the purpose.

Late in 1955-1956 the Bureau procured a Littleford-Clarkmoore heater-planer, a description of which was included in the annual report for that year. As stated in the previous report, it was anticipated that uses of the unit would be: 1. For general heater-planing. 2. To plane a V-groove to provide a shoulder to which to conform adjacent resurfacing. 3. For "hogging off" material so as to increase gutter depth and/or decrease crown height.

To date, we have not had any experience with V-grooving and very little with "hogging". However, three additional uses have been found: 1. To heat existing pavement before placing thin patches during cold weather. 2. To "weld" badly cracked pavement before resurfacing. 3. To smooth "feathered" edges of patches and surfacing.

Nearly all asphaltic pavement in San Francisco is of the hot plant mix type. Most of that which is in need of heater-planing has been in place many years. We have discovered that the older pavements are the most difficult to plane. Some pavement is of such a nature that ravelling continues for an excessively long time after heater-planing. It is believed that the latter difficulty can be overcome and surface texture improved by the application of a slurry seal.

Composition of the operating crew is varied depending upon conditions, the quantity to be removed, results desired and, sometimes, available manpower. The minimum crew consists of an engineer, a chauffeur and two laborers; the maximum crew consists of a foreman, an engineer, three chauffeurs and five laborers. The former provides for only one truck, hand loaded; the latter provides for two trucks, loaded by tractor-loader. To date, most heater-planing has been done by a crew composed of a foreman, an engineer, a chauffeur and four laborers.

The quantity of material removed depends upon results desired. The quantity that can be removed in one pass, however, depends upon the texture and condition of the pavement, and the condition of the blades and burner. The deeper the cut, the more difficult it is to control the blades; therefore, we do not always remove as much material in one pass as the machine is capable of removing. Very recently it was discovered that by removing the elements from the pressure line fuel filter, heat output is increased to the extent that the potential cut has been nearly doubled. Cuts of one-half to three-fourths inch can be made on first pass; slightly deeper cuts can be made on subsequent passes by taking advantage of retained heat. Such cuts are made eighty two inches wide at a planing speed of nine to ten feet per minute.

General heater-planing is done to remove pavement surface irregularities. A cut of one-half to three-fourths inch, made in two passes, usually suffices.

In past years, thin asphaltic patches placed during cold weather were not satisfactory because of ravelling. The practice of placing such patches had been discontinued. However, when it became necessary to place some during the past winter, excellent results were obtained by preheating the pavement by use of the heater-planer.

Probably the most interesting use so far found for the unit is the "welding" of badly cracked pavement. In a street where the pavement had cracked under the pounding of six bus lines, but where there was only slight movement of individual slabs, hot, liquid, paving grade asphalt was poured into the cracks. Heat from the heater-planer was then applied, further liquifying the asphalt and permitting it to penetrate and bond. Cracks did not reappear and the street was resurfaced about four months later.

The smoothing of feathered edges by use of the heater-planer is a simple operation incidental to gutter treatment in connection with resurfacing. It now appears that heater-planing and the application of a slurry seal after resurfacing has been feather edged some distance from the curb will provide an acceptable surface and will eliminate the need for resurfacing gutters.

RESURFACING

The Bureau of Street Repair resurfaced approximately twenty-four miles of streets during the past fiscal year. About twenty miles were resurfaced by contract under the Bureau of Engineering. Similar quantities have been resurfaced during each of the past several years.

It would appear that all of San Francisco's streets would soon by newly resurfaced. However, at the above rate, it would take eighteen years to resurface the nearly eight hundred miles of paved streets. Eighteen years is probably not far from the average life expectancy for pavement surfaces; the latter being estimated to be ten to thirty years, depending upon construction and usage.

Five years ago it was estimated that there were two hundred miles of streets in need of resurfacing; the present estimate is one hundred fifty miles. Estimates are not accurate and are subject to personal judgment. It is certain, though, that the resurfacing program of the past few years, together with an extensive reconstruction program, has reduced the backlog to some extent.

The amount of resurfacing that can be done by this Bureau is limited, primarily, by the amount of money made available for the purchase of materials, and secondly, by the two thousand dollar expenditure limitation on any one job.

The amount of money being made available for the purchase of materials each year is sufficient to permit the production of approximately fifty thousand tons of asphaltic mixtures. Approximately fifteen thousand tons are required annually for routine maintenance and repair, the remainder can be used for resurfacing.

The complete failure of a street, requiring reconstruction, is known to occur but can not be anticipated in most cases. Pavement surface, however, is known to wear out at more or less regular intervals. It would appear then that resurfacing, just to provide a smooth surface, should constitute routine maintenance. Nevertheless, this Bureau is presently operating under the policy that such resurfacing is subject to the two thousand dollar expenditure limitation. Therefore, jobs are small, averaging only about one tenth mile, and moves are frequent. It is estimated that moving time during 1956-1957 consumed a total of approximately one hundred twenty hours, equivalent to fifteen days; indirect loss because of the interruptions is difficult to estimate but probably was a similar amount. The value of the crew and equipment was approximately six hundred dollars per day.

Another serious result of the policy and limitation mentioned above, is public dissatisfaction. There are many streets where the extent of warranted resurfacing is greater than can be done for two thousand dollars. After resurfacing that portion most badly in need it is not possible to convince residents in adjacent blocks that their street was not just as bad.

By treating resurfacing as routine maintenance or increasing expenditure limitation to at least five thousand dollars, many complaints could be eliminated and efficiency increased.

A description of Machine Resurfacing was included in the report for the year ending June 30, 1955. In that report it was stated that gutters are not usually resurfaced.

The omission of gutter resurfacing prompted considerable criticism. Unquestionably, it detracts from the appearance of the street and leaves irregularities which impede cleaning. Advantages, however, are reduced cost, permitting the resurfacing of more travelled way, and retention of gutter depth. The heater-planing of a V-groove to which to conform the resurfacing would provide some improvement; not sufficient, however, to warrant consideration. Removal of existing pavement before resurfacing would permit best results but would be quite costly. During the year it was discovered that heater-planing the gutter, after resurfacing is feather edged some distance from the curb, provides considerable improvement. It is believed that the latter treatment followed by the application of a slurry seal will produce acceptable results at moderate cost.

When our paving machine failed early in May it appeared possible that repairs could not be made in time to permit completion of our year's program. To assure completion of the program, and to permit the trial of a box type spreader we propose to procure during the coming year, a Model 202 R 8-foot Rola Paver was rented for one month.

The Rola Paver is a modified spreader box which normally lays an eight foot wide lane at desired thickness up to eight inches. The width of lane can be reduced by the insertion of cut off plates or increased by opening doors at its ends. A portion of its weight, including the load, is supported on a skirt which rides on, and partially compresses, the material laid. Two small wheels support the front of the box. It is towed by means of a chain attached to the front bumper of the truck supplying material.

Results obtained by use of the Rola Paver were so satisfactory that it now appears that it will replace the machine paver on many jobs.

BRIDGES

There is little to report regarding the City's three lift bridges. Maintenance and operation continued as previously reported. There were no failures or mishaps of consequence.

The number of openings, however, increased appreciably. The increase in the number of openings of the Islais Creek Bridge was caused by extensive dredging operations, during April, 1957, which required 334 lifts. The increase in the number of openings of the Third Street Bridge and Fourth Street Bridge can be attributed to the more frequent passage of a sightseeing launch to and from its berth.

Openings during the past five years were as follows:

	Third Street	Fourth Street	Islais Creek
1956-1957	1185	629	1453
1955-1956	800	290	1338
1954-1955	950	372	1318
1953-1954	796	306	1504
1952-1953	957	362	1511

TUNNEL

There is also little to report regarding the maintenance and operation of the Broadway Tunnel.

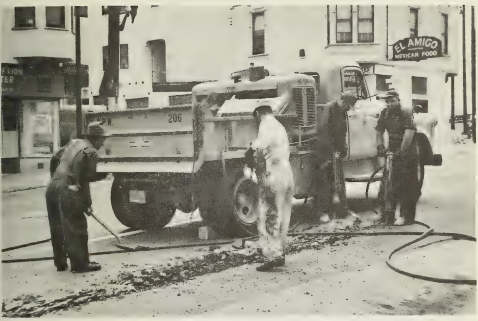
On May 27, 1957, for the first time since the tunnel was opened to the public in December 1952, weather and traffic conditions were such that the ventilating system could not keep carbon monoxide adequately cleared from the north bore. Westbound traffic was halted or detoured from 5:30 p.m. to 5:35 p.m. The ventilating system and the interconnected traffic control system worked as designed. When carbon monoxide reached four parts in ten thousand parts of air, the alarm sounded and signals were automatically set to prevent traffic from entering the tunnel.

Hours of operation of the various ventilating blowers, with similar information for 1955-1956 shown in parenthesis were as follows:

	SLOW SPEED		FAST SPEED	
	Hours	Percent of Time	Hours	Percent of Time
No. 1, North Bore - Westbound Traffic	(293.1) 160.3	1.83	(6.4) 4.1	.05
No. 2 North Bore Westbound Traffic	(291.6) 161.0	1.84	(3.3) 3.7	.04
TOTAL	(584.7) 321.3	3.67	(9.7) 7.8	.09
No. 3, South Bore Eastbound Traffic	(16.1) 18.3	.21	(11.0) 14.3	.16
No. 4, South Bore Eastbound Traffic	(15.5) 18.9	.21	(9.3) 12.0	.14
TOTAL	(31.6) 37.2	.42	(20.3) 26.3	.30

Tunnel lighting did not present any special problem during the year. Relamping, on four occasions, replaced a total of 491 burned out lamps. Replacements were considerably fewer than the 871 of the previous year. However, all burned out lamps had been replaced just prior to the beginning of the year and 135 were in need of replacement at the year's end.

The Bureau of Street Cleaning continued to keep the tunnel in its acceptably clean condition.



COMPRESSOR TRUCK

CREW AND TOOL TRUCK FOR ASPHALT REPAIR CREW

BUREAU OF STREET REPAIR Continued	CREW																															
	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIR	ASPHALT REPAIR	ASPHALT REPAIR	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	TRACTOR WORK	UTILITY	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP, HAND LOADED	CLEANUP, HAND LOADED	MATERIALS DELIVERY	YARDS	SEALING	SEALING	SEALING	MISC. ASSIGNMENTS	UNFILLED POSITIONS	PART TIME AND STANDBY	ASPHALT PLANT	BRIDGES	TUNNEL	TOTALS
EQUIPMENT																																
Passenger Cars																										4			1	1		6
Light Trucks	1											1	1	1	1		1				1											7
Medium Trucks	1	1	1	1	1	1	1											1										2				10
Dump Trucks	5	2	1	1	1			1	1	2									1	1	1		1	1			1	1	1			22
Miscellaneous Trucks																									1			2				3
Compressors						1	1											1					1	1	1			5				11
Paving Machine	1																															1
Power Rollers	2	1																										1				4
Tractor-Loader										1																						1
Tractor and Bulldozer											1																					1
Spray Machine	1																						1	1	1			2				6
Asphalt Kettles		1	1	1	1																							2				6
Concrete Saw												1																1				2
Mud-Jack												1																				1
Tip Trailer																											1					1
Power Grader																												1				1
Tractor Crane																												1				1
Sand Loader																												1				1
Surface Heater																												1				1
Heater-Planer																												1				1

Resurfacing crews, asphalt repair crews, two compressor crews, a utility crew, a hand loaded cleanup crew, the power loaded cleanup crew and the tractor crew were under the general supervision of General Foreman John P. Barry.

A utility crew, concrete repair crews, curb dressing crew, curb resetting crew, one compressor crew, two cleanup crews, materials delivery crew and yard men were under the general supervision of General Foreman Thomas Breslin. Sealing crews were under the general supervision of General Foreman W.S. Balk who also had other duties.

Bridges and tunnel were under the general supervision of Chief Operating Engineer John Donaldson. The Asphalt Plant was operated under the supervision of Asphalt Plant Foreman C.J. McFadden.

BUREAU OF STREET REPAIR Personnel and Equipment Composition of Crews 1956-1957	CREW																														
	MACHINE RESURFACING	HAND RESURFACING	ASPHALT REPAIR	ASPHALT REPAIR	ASPHALT REPAIR	COMPRESSOR WORK	COMPRESSOR WORK	UTILITY	CLEANUP, HAND LOADED	CLEANUP, POWER LOADED	TRACTOR WORK	UTILITY	CONCRETE REPAIR	CONCRETE REPAIR	CONCRETE REPAIR	CURB DRESSING	CURB RESETTING	COMPRESSOR WORK	CLEANUP, HAND LOADED	CLEANUP, HAND LOADED	MATERIALS DELIVERY	YARDS	SEALING	SEALING	SEALING	MISC. ASSIGNMENTS	UNFILLED POSITIONS	PART TIME AND STANDBY	ASPHALT PLANT	BRUDGES	TUNNEL	TOTALS
PERMANENT EMPLOYMENTS																															
Supt. of Street Repair																									1						1
Gen. Foremen of Street Repair																									3						3
Watchman																					1								5	3	9
Operating Engineer																													13	1	14
PER DIEM EMPLOYMENTS																															
Cement Finisher Helper												1																			1
Cement Finisher											1	2	3	2																	8
Laborer						2	2	4	4	1		2					2	2	4	4	1	2	4	4	4	1			1			44
Labor Sub-Foreman									1											1												2
Labor Foreman																			1													1
Chauffeur	6	3	2	2	2	1	1	1	1	2	1							1	1	1	1		1	1	1	1		1				31
Engineer, H & P Engines	3	1																														4
Dryer-Mixerman																													3			3
Foreman, Asphalt Plant																													1			1
Granite Cutter																2	1										1					4
Asphalt Worker	5	4	3	3	5																						1		1			22
Asphalt Finisher	5	4	3	2	1																											15
Sub-Fore. Asph. Finisher	1	1	1	1	1			1															1	1	1							9
Foreman Asph. Finisher																										1						1

The Machine Resurfacing Crew was assigned to general street repair during a considerable portion of the year. A standby truck and compressor were put into service and the crew performed its own compressor work and cleanup.

During the time the Machine Resurfacing Crew worked as a general repair crew, two engineers were released for other duties. One was assigned to an asphalt repair crew, full time, to provide for power rolling where hand rolling would otherwise be used. The other was assigned to operate the heater-planer, tractor crane or power grader, as needed.

"Totals" show the number of employments provided by the annual salary ordinance as ammended and the number of pieces of equipment in use at the end of the year.

Clerical service was provided by the Bureau of Accounts. The part-time services of a Chief Operating Engineer and a relief Watchman were furnished by the Bureau of Building Repair. The Bureaus rendering the services were appropriately reimbursed.

BUREAU OF STREET CLEANING

S.J. Sullivan, Superintendent

The primary function of the Bureau of Street Cleaning is to keep the 1,640 curb miles of improved streets free from litter and debris. In addition, the 85 curb miles of traffic dividing strips and channelization islands are also serviced. Other miscellaneous work includes the cleaning of tunnels; the weeding of vacant city-owned lots and easements; the clean-up of debris after vehicular collisions; the removal of truck spillages; the cleaning of city-owned monuments; and the removal of litter after all parades and civic celebrations.

In addition to these functions the Bureau supervises the activities of the Street Tree Planting Division.

OPERATIONS

General Street Cleaning

This work is done by four methods, or a combination of these: 133 blockmen sweepers who individually patrol assigned commercial sections of the City; 11 gang sweeping crews in assigned residential districts, a fleet of 11 motor sweepers; and 8 motor flushers. A detailed description of these methods was given in the 1954-55 Annual Report. This work is supplemented by the operation of 10 litter control trucks which are primarily used for emergency clean-ups, answering of complaints and the periodic patrolling of known "paper pockets" throughout the City.

Training Crew

The Bureau has established a training program for new employees. These men are assigned to a crew under a sub-foreman whose duty is to instruct the men in their work and to determine whether or not they should be recommended for continued employment. A copy of the Rules and Regulations of the Bureau including instructions as to work hours, safety and public relations is given to the employee and fully explained by the sub-foreman. The training period is from four to six weeks after which the employee is given a permanent job assignment as vacancies occur in the Bureau.

Motor Sweeping

In the operation of the 11 motor sweepers the fibre core of each sweeper must be replaced after an average of 194 miles of use, totaling 240 cores per year. The refibering of these cores has always been done by private contract and in the last few years the cost per unit has sharply risen to a current price per core varying from $32 to $37 depending on the type of equipment. Correspondence with several municipalities which are refibering their own sweepers with automatic machinery indicates that this work can be done at a cost far under the price now being paid. If further studies being made confirm these facts a request for funds to purchase an automatic core refibering machine will be made in the 1958-1959 budget.

Litter Control

The biggest problem faced by the Bureau is the clean-up of papers, cartons, wrappings and litter illegally left on the sidewalks by commercial establishments and the distributors of newspapers and advertising "throw-aways". Ten litter control trucks patrol the City picking up this discarded material from the many known locations where the ever present west wind deposits such litter. All of this occurs despite an active campaign waged by the Bureau and civic minded agencies.

During the past year the first one-man litter patrol truck was placed in operation. This unit is equipped with a two-way radio unit and is dispatched to areas for minor clean-ups as a result of vehicular collisions, truck spillages and other reported incidents requiring the Bureau's services. The operations for the first year proved highly satisfactory as a means of saving manpower and equipment costs in the release of a larger truck and three men to other duties.

Catch Basin and Storm Water Inlet Clean-up

Prior to the anticipated rains last winter a two-man crew cleaned 18,557 catch basin and storm water inlet grates of paper or debris which might block the entrances to these rain water inlets. This was a new project carried out as a means of cutting down the number of flooded street areas which usually occur with the first heavy rains. This service also included the noting and reporting to the Bureau of Sewer Repair of damaged inlets or catch basins in need of cleanout. The operation proved successful and will be continued this year.

A summary of the Bureau operation shows the following:

248,549	miles of motor truck operation, exclusive of sweepers and flushers.
116,266	cubic yards of street litter removed.
46,518	miles of sweeper operation.
71,325	miles of motor flusher operation.
18,557	catch basin and storm water inlet gratings cleaned.

PREVENTIVE STREET CLEANING

The Bureau has continued active participation in the "Anti Litterbug Campaign" being carried on by such organizations as the Chamber of Commerce, School Department, San Francisco Co-Ordinating Council, the many local garden clubs and the California State Chamber of Commerce.

In the near future 40 wire baskets and 25 aluminum street cans, all attractively painted, will be placed at strategic points throughout the downtown area. These, coupled with signs which will call the attention of pedestrians to the Litterbug Campaign, will materially assist in keeping the City free of the careless throw-away of litter.

STREET TREE PLANTING DIVISION

This Division of the Bureau has the responsibility of maintaining 6,024 trees and 60.5 acres of lawns and plantings in or bordering City streets. It is also the issuing agency of permits to individuals or groups for the planting, maintenance and removal of trees in sidewalk areas.

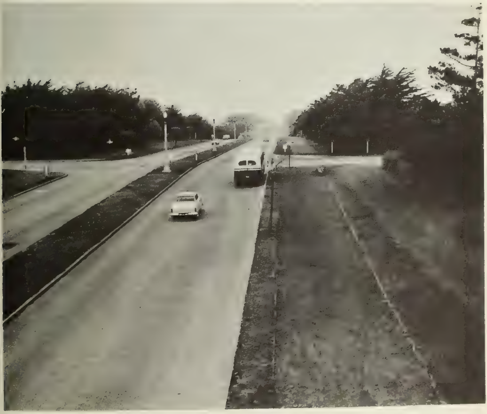
During the second year of this operation the Division received much needed additional personnel and new equipment including service trucks, a chipping machine to cut tree trimmings into chips, a 12 cubic yard truck to transport the chips, a 1,200 gallon watering truck, aluminum orchard ladders and miscellaneous small tools.

Activities included the isuance of 200 permits for the planting of street trees, 53 permits for the maintenance of trees and 83 permits for the removal of trees. Maintenance operations included the replacement of 309 trees and the planting of 1,286 shrubs and 786 plants for ground cover.

At the inception of the Division the request for the part time employment of a consulting horticulturist was denied and since some technical assistance was required a Street Tree Advisory Committee was formed. At present this Committee of four includes Mrs. Morley Thompson, a Garden Club President; Mr. Keith Davey, President of the Davey Tree Surgery, Inc.; Mr. Harry Nelson, head of the Floriculture Division at San Francisco City College; and Mr. Roy Hudson, Chairman, of the Recreation-Park Department. The City, and this Division, is indeed fortunate to have the gratuitous services of this group.

This Committee at its monthly meetings recommends the type of planting on all proposed City projects as well as the species of tree planted in sidewalk areas by property owners. The Committee is developing a horticultural plan for the entire City so that the selection of the proper tree for any location may be readily made. Such information will be made available to district community clubs, landscape gardeners and other interested parties.

Because of its terrain, San Francisco has many climatic zones where the temperatures and winds vary considerably. In order to determine the types of tree which will thrive under these conditions, pilot trees were planted throughout the City and records are made of their growth behavior. From this data the Committee will make the above-mentioned plan.



SUNSET BOULEVARD LOOKING NORTH FROM SLOAT BOULEVARD
MAINTAINED BY STREET TREE DIVISION

CHIPPING MACHINE IN USE
BY STREET TREE DIVISION

BUREAU OF BUILDING REPAIR

W.C. Zecher, Superintendent

The Bureau of Building Repair is a service organization of the Department of Public Works with a primary function to budget for and provide the maintenance and repair of 321 City and County Buildings which are the direct responsibility of the Department of Public Works.

Secondary functions of this Bureau include the responsibility to:

1) Budget for and provide operational service and/or custodial service and supplies for 31 of the above buildings. This function required the full-time services of 126 employees.

2) Repair and maintain other City Buildings by Work Order Procedure. The Brueau received 16,232 repair requisitions during the year, involving 18,556 man-days of work, from the Board of Education which has 150 buildings under its jurisdiction. Other departments with smaller physical plants required proportionately smaller number of repairs.

3) Budget for and provide labor, materials, supplies and contractual services for street traffic painting. Table 2 of this report shows the units of work accomplished and costs for the year.

The names and locations of buildings for which the Department of Public Works is responsible and a description of traffic painting operations are listed in the Annual Report for 1954-55 in the section devoted to the Bureau of Building Repair.

This year, for the first time, it has been possible to break down repair and maintenance costs of those buildings for which the Department of Public Works is responsible in a manner which can be made comparable with other organizations' practices in this field. Two factors have made this break-down possible: (1) the modernization of accounting procedures now in progress by the Bureau of Accounts and (2) the Inspection and Survey Division added to the Bureau during the 1955-56 fiscal year. This break-down is shown in Table 1 which relates budgeted expenditures for building maintenance and repair to the floor areas of the various groups of buildings. This Table includes a column showing the amount of money expended per square foot of floor area for maintenance and repair purposes.

This new approach to cost analysis of building maintenance and repair is the foundation of a system now being developed for subdistributions based on the nine major building repair divisions of the Bureau. The complete program of cost distribution will provide a sound and comparable means for planning and scheduling repair work and for budgeting to provide maintenance and repair sufficient to prevent the deterioration of public buildings.

Facilities

Shop and storage space at the Maintenance Yard at 2323 Army Street includes separate facilities for each of the nine maintenance and repair divisions of the Bureau. Since 1953, the work load and responsibilities of the Bureau have increased to the point where the present space allowed is insufficient for the needs. Budget requests to provide needed expansion of Maintenance Yard facilities have been initiated.

Vehicles and Portable Equipment

The Bureau has 51 trucks for the transportation of personnel, materials, tools and portable equipment. Of these the City owns 41 and rents 10. The number of automobiles and trucks equipped with suitable tools and equipment allowed each maintenance and repair division is listed under the caption "Maintenance and Repair Organization" in the 1955-56 Annual Report. There is an increase of 8 City-owned trucks and a decrease of 3 rented trucks and 1 hired truck compared with the fiscal year 1955-56.

TABLE 1
PUBLIC BUILDINGS UNDER THE JURISDICTION OF THE DEPARTMENT OF PUBLIC WORKS FOR MAINTENANCE AND REPAIR

	Buildings		Budgeted Expenditures 1956-57			Unit Costs Based on Floor Areas
Department and Activity	No.	Floor Areas Total Sq.Ft.	Interdepartmental	General Repairs	Total	$/Sq.Ft.
1 Adult Probation (604 Montgomery)	1 (R)	5,400	$ 394.95	$ 34.61	$ 429.56	$0.079
2 Art Commission)	1	620	97.64	-	97.64	0.157
3 City Planning (C))		5,580	454.62	-	454.62	0.081
4 Disaster Council and Corps ((	- 6 (R)	(10,000) 13,650	474.82	9.03	483.85	0.020
5 Department of Electricity						
Yard, 264 Golden Gate Ave.	3	10,112	875.16	9.03	884.19	0.087
Central Alarm Station	2	8,565	-	48.74	48.74	0.006
6 Weights and Measures						
Farmers' Market	3	17,700	695.31	18.07	713.38	0.040
7 Fire Department ((	57 1 (R)	580,000 9,480	60,791.51	25,551.56	86,343.07	0.146
8 Police Department (C)	13	118,807	20,675.02	3,911.54	24,586.56	0.206

TABLE 1
Continued

Department and Activity	Buildings No.	Floor Areas Total Sq.Ft.	Budgeted Expenditures 1956-57 Interdepartmental	General Repairs	Total	Unit Costs Based on Floor Areas $/Sq.Ft.
9 Public Health						
Health Center Building (C)	1	92,629	$ 16,042.96	$ -	$ 16,042.96	$0.173
Adult Guidance Center	-	(4,500)	2,414.57	-	2,414.57	0.536
Health Centers	(3 (7 (R)	10,741 22,151	4,672.59	13.24	4,685.83	0.204
V.D. Control	1 (R)	6,200	499.89	-	499.89	0.081
Emergency Hospitals	6	33,352	11,315.11	39.74	11,354.85	0.340
Hassler Health Home	17	130,000	42,178.29	-	42,178.29	0.324
Laguna Honda Home	25	650,000	309,656.34	60,860.18	370,516.52	0.570
San Francisco Hospital	33	753,000	402,613.59	115,222.10	517,835.69	0.687
10 Public Library	(18 (8	308,948 13,280	52,033.97	1,127.75	53,161.72	0.165
11 Public Welfare						
585 Bush Street	1	50,912	5,633.33	-	5,633.33	0.110
150 Otis	-	(11,700)	4,888.49	-	4,888.49	0.417
Redwood City	1	10,000	6,310.12	-	6,310.12	0.631
12 Public Works						
City Hall (C)	2	526,540	85,018.74	53,361.08	138,379.82	0.263
Hall of Justice (C)	2	162,523	21,375.11	38,414.90	59,790.01	0.368
150 Otis Street (C)	2	40,900	17,364.91	3.39	17,368.30	0.424

TABLE 1
Continued

Department and Activity	Buildings		Budgeted Expenditures 1956-57			Unit Costs Based on Floor Areas $/Sq.Ft.
	No.	Floor Areas Total Sq.Ft.	Interdepart-mental	General Repairs	Total	
12 Public Works - Continued						
Maintenance Yard (C)	9	77,381	$ 8,699.87	$ 6,512.78	$ 15,212.65	$0.197
Sewage Pumping Stations	14	23,085	6,022.61	41.56	6,064.17	0.262
Sewage Treatment Plants	36	543,330	55,001.62	33,068.66	88,070.28	0.162
Street Cleaning Yard	1	4,400	409.91	359.77	769.68	0.175
13 Purchaser of Supplies						
Shop #1 (	1	37,695	2,163.73	7.31	2,171.04	0.021
Shop #2 (	1 (R)	23,100				
Shop #3 (	1 (R)	13,400				
Warehouse (	1	29,632				
14 Real Estate Department						
Civic Auditorium	1	317,000	22,479.86	183.01	22,662.87	0.072
15 Record Center						
150 Otis Street	-	(10,700)	653.73	-	653.73	0.061
16 Registrar of Voters						
150 Potrero	1 (R)	20,410	376.99	-	376.99	0.018
1440 Broadway	1 (R)	26,000	474.10	-	474.10	0.018
17 Retirement System (C)	1	6,450	330.29	-	330.29	0.051

TABLE 1
Continued

Department and Activity	Buildings No.	Buildings Floor Areas Total Sq.Ft.	Budgeted Expenditures 1956-57 Interdepartmental	Budgeted Expenditures 1956-57 General Repairs	Budgeted Expenditures 1956-57 Total	Unit Costs Based on Floor Areas $/Sq.Ft.
18 Sheriff						
County Jails #2 and #4	7	138,970	$ 31,591.04	$ 5,034.36	$ 36,625.40	$0.264
19 Juvenile Court						
Youth Guidance Center	16	200,828	74,295.42	3,074.78	77,370.20	0.385
Log Cabin Ranch	16	32,000	8,939.72	-	8,939.72	0.279
TOTALS	321	5,064,771	$1,277,915.93	$346,907.19	$1,624,823.12	$0.321

LEGEND:

(R) Indicates building is rented. (Total of 28 rented buildings with a combined floor area of 153,071 sq. ft.)

(C) Indicates custodial and or operational services also provided by Bureau of Building Repair.

(00,000) These floor areas are not added to obtain the total floor areas of all buildings as these areas are included elsewhere with other buildings.

The cost shown is the direct cost including labor, materials, supplies and contractual service corresponding to the Bureau work program and budgeted funds.

TABLE 2

STREET TRAFFIC PAINTING

Classification	Unit	Amount	Unit Cost	Total Cost
Traffic Line Striping	Lineal Mile	360.62	$94.26	$ 33,993.51
Traffic Line Spotting	Lineal Mile	33.22	96.18	3,195.14
Intersection General				
(a) Crosswalks (Including words)	Lineal Foot	457,826	.1077	49,294.07
(b) Guide Lines (Including words)	Lineal Foot	71,275	.1149	8,187.16
School Crosswalks (including words)	Lineal Foot	163,533	.1757	28,737.84
Bus Zones (Including words)	Lineal Foot	142,005	.1063	15,100.98
Parking Stalls (All Types)				
(a) Diagonal	No. of Stalls	1,679	1.1536	1,936.88
(b) Four Foot Cross	No. of Stalls	7,347	.7656	5,624.81
Railroad Crossings	Lineal Foot	6,544	.0974	637.45
Curb Painting				
(a) General	Lineal Foot	472,029	.0855	40,342.65
(b) Taxi Zones	Lineal Foot	5,561	.1135	631.27
TOTAL COST				$187,681.76

ADMINISTRATIVE BUREAUS

R. Brooks Larter
Assistant Director, Administrative

During the fiscal year 1956-57, the progress toward better administrative services for the department continued. As anticipated in the last Annual Report, the telephone switchboard at Army Street was eliminated in July 1956 and all telephone service will be provided from the City Hall telephone switchboard in the future. This consolidation eliminated one position of telephone operator.

The IBM machine accounting system was finally installed in April 1957, and the former manual system was continued in operation as a parallel system for more accurate verification until June 30, 1957. On that date most of the manual system was discontinued and the IBM unit assumed full responsibility for distribution of labor and material costs to the proper job for the Bureau of Building Repair. Inventory control and materials costing was also assumed by the IBM unit. Full appropriation accounting and accounting for other Maintenance and Operation Bureaus will not be possible until the 1958-59 fiscal year.

During 1956, a system of Administrative Bulletins and Administrative Memoranda was initiated. The Bulletins will contain instructions and information of a long-term value, whereas the Memoranda contain information which is of momentary value only such as holidays, United Crusade, etc. Distribution of this material will depend on the nature of the information.

BUREAU OF ACCOUNTS

J.J. McCloskey, Chief Clerk

The Bureau of Accounts is the bookkeeping and accounting division of the Department of Public Works. Its principal activity is the control of the budgetary and financial transactions for all bureaus of the Department. This includes the processing of all documents dealing with the disbursement of funds, including their channelization through every required procedure until finally liquidated.

The Bureau operates an office at the City Hall, to which there are assigned one Accountant II, two Accountants I, one General Clerk and one General Clerk-Stenographer. These employees handle the accounts for construction work being performed by the Department and also the operating accounts for the General Office, Bureau of Engineering, Bureau of Architecture, Bureau of Building Inspection and Central Permit Bureau.

The Bureau's principal office is located at the Department of Public Works Maintenance Yard, 2323 Army Street, at which the greater number of employees is located. This yard office handles the operating accounts for the following Maintenance and Repair Bureaus: Bureau of Building Repair, Bureau of Sewer Repair, Sewage Treatment Plants, Sewage Pumping Stations, Bureau of Street Cleaning, Bureau of Street Repair, Bridges and Tunnels and the Street Tree Planting Division.

PERSONNEL

As of June 30, 1957, the permanent staff of 37 employees included:

1 - Chief Clerk
2 - Head Clerks
6 - Accountants I
2 - Accountants II
1 - Accountant III
12 - General Clerks
1 - Senior Clerk
4 - General Clerk-Stenographers
4 - General Clerk-Typists
1 - Supervisor I.B.M.
1 - Key Punch Operator I.B.M.
2 - Tabulating Machine Operators I.B.M.

In addition to the above employees a Storekeeper is assigned by the Purchaser of Supplies to perform duties in connection with the operation of the sub-storeroom and materials yard.

Funds were appropriated in this year's budget for the employment of one General Clerk-Typist to perform the clerical duties required in connection with the Street Tree Planting program in accordance with Ordinance Number 8993, July 1, 1955 - which placed the jurisdictional responsibility for this program within the Department of Public Works.

During the year, five permanent positions were re-classified by the Civil Service Commission, as follows:

(a) One position of Head Clerk was re-classified to Accountant III for the purpose of assisting the Supervisor of the Bureau in maintaining and supervising the accounts and the preparation of the budget for all bureaus of the Department.

(b) One position of Senior Clerk was re-classified to Head Clerk for the purpose of maintaining and supervising the payrolls and personnel records for all operating bureaus at the Maintenance Yard, 2323 Army Street.

(c) One position of Account Clerk, one position of General Clerk, and one position of General Clerk-Stenographer were re-classified to one Key Punch Operator, I.B.M., and two Tabulating Machine Operators, I.B.M., in connection with the machine accounting system installed during the fiscal year.

During the year, two positions of Telephone Operator were assigned to the City Hall because of the consolidation of the telephone switchboard at the Army Street Maintenance Yard with the City Hall telephone exchange.

At the start of the fiscal year, funds were provided in the budget for the installation of accounting machines at the Army Street Maintenance Yard. This change in the accounting procedure was recommended by R. Brooks Larter, Assistant Director, Administrative, after appropriate studies had been made of the accounting methods and records kept by the Bureau.

On July 1, 1956, one position of Supervisor, Tabulating Division was created, so that all required card forms, report forms, wiring diagrams and operating manuals would be available for the operating staff upon delivery of the accounting machines.

During the month of March, 1957, the International Business Machine equipment was received at the Maintenance Yard. All other equipment necessary for operation of the machine accounting system had been purchased previously. Using these machines, the daily time report cards were changed to an I.B.M. form, through which a considerable savings in printing was realized. By using this type of form, labor costs now are recorded mechanically with greater speed and accuracy than was possible under the previous manual method. Also, the recording of the perpetual inventories was converted from the manual posting method to mechanical processing by the accounting machines.

In addition, during the months of April, May, and June, the machine accounting section recorded all job costs and budget appropriation accounts of the Bureau of Building Repair for the fiscal year 1956-57. The primary purpose of this recording was to parallel the previously established procedures being used in work order costing and appropriation expenditures in order to determine the necessary adjustments required for the desired conversion to machine accounting.

Budget expenditures for operation of the Bureau of Accounts for the fiscal year 1956-57 were as follows:

Permanent Salaries	$122,634.64
Contractual Services	8,136.47
Materials and Supplies	3,267.79
Services of Other Departments	4,409.48
Equipment	3,726.31
TOTAL	$142,174.69

FUNCTIONS AND ORGANIZATION

The operating functions of the Bureau embrace control of payroll procedure, personnel records and field time-keeping; purchase order requisitions; sub-storeroom and inventories; automotive expenditures and gasoline and tire records; work order job costs and invoicing; side sewer job and refunds accounts; State gas tax subventions and Bond Funds accounts; the cash revolving fund for the Department; the stores revolving fund; budget preparation and controlling accounts; Radio Control Station; and the supplying of clerical service to all of the operating bureaus.

Included in the general functions of the Bureau are three well defined sub-divisions: Payrolls and Personnel; Purchasing and Stores including inventories; Gas Tax subventions, Bond Funds and Budgetary and Cost accounting and reports.

Three field timekeepers check outside operations for payroll verification and also act as paymasters on semi-monthly pay days, delivering pay warrants to employees on the job.

One General Clerk is assigned to act in the capacity of Control Station Operator of the Department's mobile radio system which began operation on March 1, 1954.

OPERATIONS

Job costs pertaining to damages to City property under the jurisdiction of the Department are compiled and forwarded to responsible parties for collection. These costs amounted to $8,269.34 for the fiscal year and embraced 209 cases, covering damages to bridges, automotive equipment, street structures, traffic signals, street signs, street trees, traffic devices and prisoner damage to police stations. The Bureau handled the fiscal processing of contracts under bond issues for Street Improvements, Sewers, Sewage Treatment Plants, Schools, Hospitals, and Fire Houses under programs which are expected to continue into subsequent years.

In the supplying of materials for the varied activities of the Department, a sub-storeroom and a material yard are conducted, through which 28,565 transactions were handled involving the delivery of 85,388 items to jobs. Outside purchases from vendors brought about the issuance of 5,934 requisitions involving 15,935 items and 5,491 delivery orders involving 16,473 items and 17,020 storeroom tags involving the delivery of 51,060 items and 120 requisitions on storekeeper involving 1,920 items.

The Stores Revolving Fund under the control of the Bureau is designed to permit the purchase in advance of constantly used materials. Plumbing supplies, electrical items, paints, hardware, lumber, glass, tools, sewer pipe, brick, cement, castings and miscellaneous needs which can be foreseen, are carried in Stores and charged out to the various jobs as needed. Controls have been established which facilitate monthly reimbursements for goods withdrawn, and stores records are maintained on a perpetual inventory basis subject to annual physical check.

The Department Cash Revolving Fund of $1,500.00 is used by the Bureau for payment of small bills and transportation charges, and enables workmen on field work to make cash purchases at neighborhood stores, thus avoiding trips to downtown establishments. During the fiscal year, 45 monthly Revolving Fund vouchers were prepared, requiring the issuance of 1,759 warrants for a total of $18,542.12. All transactions are conducted under controls set up by Ordinance of the Board of Supervisors.

Detailed records of all expenditures are maintained, particularly on jobs performed under job estimates and work order procedures. In these, the Charter requires that all elements of indirect and supervisory costs be considered and made part of the final job cost. To accomplish this, indirect labor is pro-rated monthly on an exact percentage basis, as are overhead charges for accident compensation, sick leave, vacation, retirement, equipment replacement and miscellaneous. These items of overhead are accumulated in reserves to meet the requirements designated. Charges for small tools and shop supplies used in work order operations are made against the miscellaneous reserve.

BUREAU OF ACCOUNTS

Interdepartmental Service, under work order procedure for:

Schools	$ 879,591.39
Health	1,009.61
Recreation - Park	31,514.06
Public Buildings Repairs	350,465.29
Public Buildings Improvements	158,178.49
Gas Tax Accounts	1,972,675.25
Engineering	8,003.96
Public Utilities	67,259.61
General Fund	22,504.27
Special Inspection	10,464.16
State Highway Cleaning	44,935.37
Paving Side Sewers	31,803.79
State Highway Repairs	26,661.33
State Highway Projects	6,290.43
Legion of Honor	6,526.22
Publicity and Advertising	2,276.52
War Memorial	6,885.35
M.H. De Young Museum	5,443.38
Sewage Treatment Plant Bonds	56,017.32
Sewer Bonds	294,905.16
Street Bonds	319,348.36
San Francisco Hospital Bonds	395,419.93
Exhibit Hall Bonds	1,011,542.42
Juvenile Court Bonds	511.62
School Bonds	81,938.64
Fire House Bonds	41,869.63
Laguna Honda Home Bonds	463,909.65
Hall of Justice Bonds	13,802.30
Miscellaneous	14,246.75
TOTAL INTERDEPARTMENTAL SERVICE	$6,326,000.26

SUMMARY OF TRANSACTIONS

Budgeted Funds, Subject to Control and Appropriated to:

BUREAU	BUDGET 1955-56	BUDGET 1956-57	EXPENDITURE 1955-56	EXPENDITURE 1956-57
GENERAL FUND				
General Office	$ 125,184	$ 148,734	$ 123,387	$ 145,070
General Office - Improvements	565,610	1,306,444	353,969	844,535*
Architecture	451,442	430,717	431,560	427,645
Building Inspection	392,761	404,677	381.465	389,510
Engineering	438,396	451,413	412,747	455,463
Central Permit	43,985	47,475	42,993	46,556
Accounts	122,530	152,767	118,160	142,175
Building Repair	2,255,651	2,518,216	2,228,570	2,355,376
Traffic Striping	186,433	198,487	176,518	187,682
Street Cleaning	1,774,785	1,886,442	1,746,046	1,873,536
Sewer Repair	882,082	928,509	868,362	906,180
Sewage Treatment Plants	884,855	943,079	864,304	924,333
Sewage Pumping Stations	94,329	96,961	91,956	94,490
SPECIAL ROAD IMPROVEMENT FUND				
Street Repair	1,288,425	1,415,555	1,264,409	1,393,672
Bridges and Tunnels	152,800	161,607	151,046	159,127
Traffic Engineering	334,678	455,487	309,734	417,099
Traffic Signal Maintenance	174,857	238,478	171,509	233,081
Engineering Adm.	44,225	45,975	43,535	45,363
Maintenance and Reconstruction	327,000	200,800	171,654	83,225
Construction	1,590,000	1,538,930	385,826	891,116ø
Street Tree Planting	80,527	115,050	78,756	110,863
SPECIAL GAS TAX STREET IMPROVEMENT:				
Maintenance	375,600	353,000	307,105	320,705
Construction	4,411,000	2,177,000	1,257,892	1,088,583≠
TOTALS	$16,997,155	$16,215,803	$11,981,503	$13,535,385

* Expenditures of $737,530 from funds budgeted in prior years.

ø Expenditures of $419,161 from funds budgeted in prior years.

≠ Expenditures of $818,529 from funds budgeted in prior years.

CENTRAL PERMIT BUREAU

Sidney Franklin, Supervisor

FUNCTIONS

The Central Permit Bureau is the focal point for the issuance of all permits under the jurisdiction of the Department of Public Works. This includes permits for the erection, alteration and moving of buildings (as well as the subsidiary permits in connection therewith), permits for all types of billboards and signs, and permits involving the use or excavation of streets or sidewalks. It is the function of this bureau to receive applications for these various permits, route them to the proper departments and bureaus for their approval, issue the necessary permits and collect the required fees. The bureau was created primarily for the convenience of the public and it serves this purpose by making it possible for all business involving permits to be transacted in one central office.

The Central Permit Bureau is the custodian of all public records relevant to permits issued by the Department of Public Works, and of all plans and specifications in conjunction with these permits. These records date back to the 1906 Earthquake and have been of particular importance during the past year in determining the status of buildings affected by our slum clearance program. Approximately 15% of the time of our personnel is now devoted to giving information obtained from our current and old records.

Another service performed in this bureau is the assignment of street addresses to all new buildings and the elimination of possible confusion resulting from improper existing numbers. Our official house number records are constantly referred to by realtors, title insurance companies, etc., when the correct street numbers for buildings must be obtained.

It is also the duty of the Central Permit Bureau to render bills for all claims for damages to property under the jurisdiction of the Department of Public Works, and for costs in excess of deposits in the installation of side sewers. The moneys collected from these bills, as well as all other receipts of the department, are cleared through this bureau for deposit in the proper funds in the City Treasury.

PERSONNEL

The personnel of the Central Permit Bureau, as of June 30th, 1957, was as follows:

1 Supervisor
1 Cashier
2 Senior Clerks
1 General Clerk-Stenographer
5 General Clerk-Typists

TABLE I
PERMITS ISSUED AND FEES RECEIVED

	1956-1957		1955-1956	
	Permits	Fees	Permits	Fees
Buildings	11,389	$ 199,012	9,227	$ 220,381
Billboards	138	584	218	691
Demolitions	298	3,325	305	2,695
Boiler Installations	64	372	88	548
Boiler Inspections	740	3,997	1,473	6,270
Street Space *	1,291	28,933	1,004	35,978
House Numbers	620	2,356	867	3,237
House Moving	23	460	51	1,020
Excavations (Pub.Util., etc.)	9,759	18,424	9,094	17,511
Excavations (Excl. of Util.)*	653	2,924	829	2,931
Flue Registrations	60	1,200	35	700
Flues - New Buildings	55	84	46	23
Flues - Old Buildings	76	222	70	140
Flues - New Buildings, Coupons	72	900	44	550
Flues - Old Buildings, Coupons	17	340	7	140
Posting Notices	551	1,547	707	1,988
Flower Markets	43	1,428	54	1,440
Advertising	20	2,862	14	2,485
Surveys	26	10,950	28	15,820
Engineering Inspections	51	17,025	53	13,635
Electrical Inspections	17,454	91,006	23,021	97,340
Sign Inspections	≠	8,449	≠	7,570
Electrical Sales	2,283	23,093	2,100	21,999
Sidewalks	-	-	12	-
Plan Checking ø	3,111	46,106	239	5,166
Architect's Investigation ø	23	855	2	200
Garage Door Coupons ø	18	1,350		
Hearings for Substitute Material ø	8	640		
TOTAL - TABLE I	48,843	$ 468,444	49,588	$ 460,638
TOTAL - TABLES II and III	2,116	$5,652,785	2,276	$4,782,145
GRAND TOTAL - PERMITS and REVENUE	50,959	$6,121,229	51,864	$5,242,783

* Permits and fees only. See Table II for refundable deposits.

ø New fees inaugurated May 7th, 1956.

≠ Included in Electrical Inspections

TABLE II

MISCELLANEOUS DEPOSITS

Refundable Deposits	1956-1957 Permits	 Deposits	1955-1956 Permits	 Deposits
Street Space	*	$ 17,300	*	$ 21,120
Subsidewalks	-	-	-	-
Deposit on Plans	1,354	52,762	1,428	49,937
Excavations	*	785	*	1,044
TOTAL	1,354	$ 70,847	1,428	$ 72,101

* Street Space and Excavations require both a fee and a deposit. Amounts shown are deposits only.

Partially Refundable Deposits:

Side Sewers	534	$181,375	610	$182,514
Excess Costs - Side Sewers	100	9,331	143	7,594
TOTAL RECEIVED	634	$190,706	753	$190,108
AMOUNT REFUNDED ø		$ 75,140		$ 45,592
Net Revenue applied or to be applied to Installation Costs		$115,566		$144,516

ø Includes Total and Partial Refunds.

Agency Deposits:

Street Improvement Bonds	128	$ 9,802	95	$ 9,667
TOTAL	2,116	$271,355	2,276	$271,876

TABLE III

MISCELLANEOUS REVENUE

	1956-1957 Revenue	1955-1956 Revenue
General Fund	$ 49,219	$ 49,071
Special Road Improvement Fund	2,779,218	2,889,498
State Highway Trust Fund	22,337	60,688
1948 School Bond Fund	2,307	536
Special Gas Tax - Street Improvement Fund	2,527,549	1,509,670
Library Fund	-	-
San Francisco Unified School District Fund	300	806
1952 Fire House Fund	500	-
TOTAL	$5,381,430	$4,510,269

TABLE IV

STATEMENT OF CONDITION

SPECIAL FUNDS AS OF JUNE 30, 1957

	Balance June 30, 1956	Deposits 1956-1957	Refunds 1956-1957	Transferred to Reserve	Balance June 30, 1957
Special Permit Fund (Street Space and Subsidewalk Dep.)	$20,749.00	$17,300.00	$23,370.00	$ 4,489.00	$10,190.00
Street Improvement Fund (Payments of Street Improvement Bonds)	465.27	-	-	-	465.27
Excavation Fund	3,482.50	784.80	2,340.50	97.50	1,829.30
Deposits on Plans	9,289.00	52,762.00	54,578.00	50.00	7,423.00

APPENDIX I

BUREAU OF ENGINEERING - CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Way
July 1, 1956 - June 30, 1957

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1956-1957
A	Major Thoroughfares	2	$2,677,083.20	$1,338,647.71
B-1	Streets - Private Contracts	25	318,830.00	257,921.00
B-2	Streets - Assessment Proceedings	14	168,306.35	167,163.11
B-3	Streets - Public Contract City Pay	8	429,280.55	391,041.22
B-4	Streets - Car Track Removal	3	498,104.52	557,051.76
C	Traffic Signals & Channelization	8	317,958.13	244,923.36
D-1	Sewers - Pipe Vitrified Clay & Concrete	6	633,470.50	580,152.77
D-2	Sewers - Concrete Monolithic	3	475,016.00	463,259.20
E	Miscellaneous	45	798,052.76	1,032,404.96
	TOTALS	114	$6,316,102.01	$5,032,565.09

TABLES

On the following pages appear separate tables of current contracts for each of the types of Construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
Spec. Rd.	Special Road Improvement Fund
Major Sts.	Special Gas Tax Improvement Fund
Assmt.	Assessed to property benefiting under the Street Improvement Ordinance of 1934
Pd. Prop. Owners	Cost borne by Property Owners under private contract
1944 Sewer Bond	Bond Issue voted by citizens on November 7, 1944 - $12,000,000
1947 St. Imp. Bond	Bond Issue voted by citizens on November 4, 1947 - $22,850,000
1948 Sewage Tr. Bond	Bond Issue voted by citizens on June 1, 1948 - $15,000,000
1954 Sewer Bond	Bond Issue voted by citizens on June 8, 1954 - $12,645,000
1947 Off Street Parking Bond	Bond Issue voted by citizens on November 4, 1947 - $5,000,000
954 Laguna Honda Bond	Bond Issue voted by citizens on November 2, 1954 - $5,475,000

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A - MAJOR THOROUGHFARES					
Silver Ave. - Mission St. to St. Thomas Ave. (Pavement Reconstruction & Resurfacing) The Lowrie Paving Co.	5-2-56	10-26-56	$ 191,807.50	$ 189,937.50	Spec.Rd. Major Sts.
Golden Gate Park Connecting Road Between State Highway Route 56 and 25th Ave. & Fulton St. (Construction) Chas. L. Harney, Inc.	5-9-56	8-6-56	14,267.01	14,267,01	Major Sts.
Market St. & Portola Drive - Hattie St. to Corbett Ave. (Widening & Realignment) M & K Corporation	7-18-56	43	2,444,830.00	902,190.00	Major Sts. Spec.Rd. 1944 Sewer Bd.
Lake St. - Between 6th Ave. & 28th Ave. (Pavement Reconstruction) The Fay Improvement Co.	8-29-56	2-21-57	232,253.20	232,253.20	Spec.Rd. 1954 Sewer Bd.
Total Awarded and Expended During Fiscal Year			$2,677,083.20	$1,338,647.71	

CURRENT CONTRACT DATA 1956-1957

Street or Subdivision	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS					
Dalewood Way - Lansdale Ave. - 550' E.	S,C,P	Chas.L.Harney,Inc.	9-14-55	99%	$ 15,000.00
*Thrift St. - Portions - Plymouth Ave. & Summit St.	S,C,P	Chas.L.Harney,Inc.	9-23-55	1-22-57	10,500.00
2nd Ave. at Parnassus Ave.	S	James Barnes Const. Co.	11-9-55	0	2,000.00
Molimo Drive - 388' N. of Myra Way to 400' N'ly	S,C,P	The Lowrie Paving Co., Inc.	11-9-55	8-17-56	13,600.00
*Foerster St. Portions - Los Palmos & Teresita Blvd.	S,C,P	The Fay Impr.Co.	12-28-55	4-15-57	22,000.00
Burnett Ave. - Portola Drive and a line 177' N'ly from Glenview Drive	S,C,P	The Fay Impr. Co.	4-6-56	8-14-56	23,500.00
Kirkham St. from 5' to 100' West of 9th Ave.	C, P	Pacific Pavements Co., Ltd.	5-9-56	11-5-57	600.00
Dicha Alley Between Wood St. & Lupine Ave.	Stair	J. Cyril Johnson	5-16-56	6-15-56	700.00
La Grande Ave. - Crossing of Brazil Ave. N/S	C, P	The Fay Impr. Co.	6-13-56	7-25-56	600.00
26th St. - 60' E. Kansas St. to De Haro St.	C, P	The Lowrie Paving Co., Inc.	6-20-56	8-7-56	10,000.00
Ulloa St. - Kensington Way to 850' E'ly	S	The Lowrie Paving Co., Inc.	7-13-56	8-23-56	9,800.00

CURRENT CONTRACT DATA 1956-1957

Street or Subdivision	Impvts.	Contractor	Awarded	Completed Date or %	Contract Amount
B-1 STREETS - PRIVATE CONTRACTS - PD. PROP. OWNERS (Continued)					
Wawona St. - 28th Ave. - 30th Ave.	C,S,P	The Fay Impr. Co.	7-20-56	10-9-56	$ 15,000.00
Midtown Terrace No. 5 - Contract 1	S	Standard Bldg.Co.	7-25-56	11-15-56	30,000.00
Harkness Ave. (S 1/2) W'ly line Sparta to 62' E.	C, P	E. J. Treacy	8-8-56	0%	1,715.00
Avon Way N. Sloat Blvd. & E. 19th Ave.	S	Arthur Wallgren	8-17-56	11-7-56	2,795.00
19th St. - at Rhode Island & De Haro Sts.	C, P	Phoenix Simpton Co.	8-17-56	11-7-56	1,400.00
Midtown Terrace No. 5 - Contract 2	C, P	Standard Bldg.	8-29-56	12-21-56	29,000.00
23rd St. East of Illinois St.	C.B.	Pacific Pavements Co., Ltd.	9-19-56	5-8-57	800.00
Fenton Lane - West of Portola Drive	S	Harney Development Co.	9-26-56	11-21-56	1,700.00
14th Ave. North of Lake St.	S	The Lowrie Paving Co.	9-26-56	10-16-56	8,470.00
Marsily St. South of Bosworth	S	Pacific Pavements Co., Ltd.	10-10-56	11-23-56	2,300.00
Forest Knolls Subdivision No. 1	S	Gellert Bros.	10-10-56	12-4-56	7,500.00
McKinnon Ave. - Barneveld Ave. - Upton St.	S,C,P	The Fay Impr.Co.	11-21-56	60%	22,250.00
Laguna Honda Blvd. Opposite Plaza	S	Prodanovich Bros.	12-7-56	1-14-57	1,000.00
Portola Drive - Sidney Way	S	J. V. Campbell	12-12-56	12-20-56	600.00

Laguna Honda Blvd. Opposite Plaza	S	Prodanovich Bros.	12-7-56	1-14-57	1,000.00
[illegible] Way	[illegible]	J. V. Campbell	12-12-56	12-20-56	600.00
California St. - West of Presidio Ave.	C, P	McDonald, Young & Nelson	1-9-57	2-21-57	800.00
Kearny St. - Lombard St. - Chestnut St.	S,Wall	Theo. G. Meyers & Son	1-23-57	90%	10,000.00
Amherst Terrace Subdivision	S,C,P	Arthur Haskins,Inc.	2-6-57	60%	43,000.00
Somerset St. - Ordway St. & Mansell St.	S,C,P	The Fay Impr. Co.	4-12-57	0%	12,500.00
Felton St. - Princeton St. & Cambridge St.	S,C,P	Arthur Haskins,Inc.	4-12-57	60%	20,000.00
Carroll Ave. - Ingalls St. & Hawes St.	S,C,P	The Fay Impr. Co.	4-26-57	40%	25,100.00
Marvel Court - 32nd Ave. & 240' W.	S,C,P	Chas.L.Harney,Inc.	5-1-57	0%	12,300.00
Revere Ave. S/W 1/2 250' N. of Rankin St.	S	Prodanovich, Inc.	5-1-57	0%	800.00
Forest Knolls Subdivision No. 1 Contract 2	S	Gellert Bros.	5-8-57	60%	49,000.00
Sherwood Court S. of Myra Way	S,C,P	Eaton & Smith	6-14-57	0%	11,000.00
Total Awarded During Fiscal Year					$318,830.00
Total Value of Work Done During Fiscal Year					$257,921.00

* Remaining Portions improved under Public Contract

S = Sewers   C = Curbs   P = Paving   C.B. = Catchbasin

CURRENT CONTRACT DATA 1956-1957

Street or Subdivision	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREET ASSESSMENT PROCEEDINGS					
Alpha St. - Wilde Ave. & Tucker St. Tucker St. - Alpha N.W. to Exist. Pavement	S,C,P	Chas.L.Harney,Inc.	8-31-55	7-30-56	$ 12,057.50 (5,800.00)-
*Thrift St. - Portions - Plymouth St. & Summit St.	S,C,P	Chas.L.Harney,Inc.	9-23-55	1-22-57	5,353.00 (2,900.00)-
Ellsworth St. - 275' & 350' S. of Ellsworth	S,C,P	M. J. Lynch	11-4-55	9-24-56	3,585.00 (2,000.00)-
*Foerster St. - Portions - Los Palmos Dr. to Teresita Blvd.	C, P	The Fay Impr. Co.	12-28-55	4-15-57	9,706.60 (6,000.00)-
Campbell Ave. - Goettingen St. & Somerset St. Somerset St. - Campbell & San Bruno Ave. Somerset St. - Intersection of Campbell	S,C,P	Eaton & Smith	3-16-56	10-2-56	19,063.75 (12,000.00)-
Powhattan Ave. - Bradford St. & Peralta Ave. Powhattan Ave. - Intersection at Bradford & Peralta Peralta Ave. - Powhattan Ave. to S'ly Term.	S,C,P	The Fay Impr.Co.	4-25-56	1-9-57	15,722.90 (5,300.00)-
Innes Ave. - Hawes St. to Ingalls St.	S	M. J. Lynch	5-2-56	7-5-56	6,474.00 (2,400.00)-
Bradford St. - Cortland Ave. to Mojave St.	C, P	E. J. Treacy	5-31-56	10-22-56	8,509.00 (4,300.00)-

Burnham St. - Elizabeth St. & 24th St. & X-ing	S,C,P	The Fay Impr. Co.	5-31-56	9-5-56	8,787.30 (1,200.00)-
Olympia Way - Clarendon Ave. - 917' E.	C, P	The Fay Impr. Co.	6-27-56	9-13-56	18,445.00 (0)
				- - - -	- - - - - - - -
Custer Ave. - Newhall St. to Mendell St.	S	E. J. Treacy	7-11-56	9-18-56	9,537.00 (0)
Rutledge St. at Franconia and Brewster Sts.	S,C,P	The Lowrie Paving Co., Inc.	8-15-56	11-14-56	3,770.00 (1,800.00)-
La Grande Ave. - Russia Ave. to N'ly Term.	S,C,P	Chas.L.Harney,Inc.	8-15-56	3-22-57	7,740.90 (2,000.00)-
University St. - Olmstead St. & Dwight St.	S,C,P	The Fay Impr.Co.	8-15-56	60%	16,481.00 (5,200.00)-
Parkhurst Alley - Clay St. to N'ly Term.	S,C,P	M. J. Lynch	10-17-56	12-19-56	5,470.00 (0)
Waithman Way - Ulloa St. to Portola Drive	C, P	Chas.L.Harney,Inc.	11-2-56	1-22-57	2,484.00 (1,200.00)-
Hammerton Ave. - 100' & 325' S. Bosworth St.	S,C,P	The Lowrie Paving Co., Inc.	11-28-56	4-17-57	7,103.00 (3,300.00)-
Alabama St. & Other Locations - Sidewalks	S, W	Mac Constr. Co.	12-28-56	4-25-57	13,140.00 (0)
Holladay Ave. - Faith St. to Mayflower St.	S,C,P	Chas.L.Harney,Inc.	3-6-57	50%	14,282.00 (2,900.00)-
Madison St. - Silliman St. to Pioche St. Valmar Terrace - Silliman St. to Madison St.	S,C,P	Chas.L.Harney,Inc.	3-29-57	10%	23,290.30 (14,000.00)-

CURRENT CONTRACT DATA 1956-1957

Street or Subdivision	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREET ASSESSMENT PROCEEDINGS (Continued)					
16th St. - Roosevelt Way & E. Term.	S,C,P	The Fay Impr. Co.	4-12-57	2%	15,966.00 (1,600.00)-
Boylston St. - Gaven St. & Sweeney St. Gaven St. - Boylston & Bowdoin St.	S,C,P	The Fay Impr. Co.	4-12-57	30%	29,872.00 (13,500.00)-
Detroit St. - Joost Ave. & Monterey Blvd.	Stair	K. S. Scheyer	4-17-57	90%	2,995.00 (1,500.00)-
Harvard St. - Felton St. & Burrows St.	S,C,P	The Fay Impr.Co.	6-26-57	0	16,175.15 (6,200.00)-
Total Awarded During Fiscal Year					$168,306.35
Total Value of Work Done During Fiscal Year					$167,163.11

* Remaining Portions of Street Under Private Contract

( )- Estimated Amount of City Obligation. Balance Through Assessment of Property Benefited. City Funds From Special Road Improvement Fund.

S = Sewers C = Curbs P = Paving

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY					
Ocean Ave. & Other Locations (Resurfacing) The Fay Impr. Co.	5-31-56	7-31-56	$ 19,898.57	$ 10,803.57	Major Sts.
Congo St. - Between Hearst Ave. & Mangels Ave. Brick Pavement Replacement Pacific Pavements Co., Ltd.	7-18-56	11-29-56	59,944.22	59,944.22	Spec.Rd.
Westwood Park Streets & Others (Resurfacing) Pacific Pavements Co., Ltd.	7-25-56	12-27-56	106,734.59	106,734.59	Major Sts.
California Street & Others (Brick Pavement Replacement) Eaton & Smith	10-17-56	1-25-57	22,705.47	22,705.47	Spec.Rd. Muni R.R.
Drumm St. - Between Sacramento St. & Commercial St. (Pavement Reconstruction) Eaton & Smith	10-24-56	1-25-57	5,917.70	5,917.70	Spec.Rd.
Sunset District Streets & Others (Resurfacing) Bragato Paving Co.	12-12-56	5-26-57	184,935.67	184,935.67	Major Sts.
Woodward St. Between 14th St. & Duboce Ave. (Reconstruction) The Lowrie Paving Co., Inc.	3-1-57	75%	20,000.00	0	1954 Sewer Bd. Spec.Rd.

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY (Continued)					
Montgomery St. - Post St. to Sutter St. (Reconstruction) Pacific Pavements Co., Ltd.	5-15-57	0	$ 12,723.00	0	Spec.Rd.
Maiden Lane - Stockton St. to Kearny St. (Reconstruction) The Fay Impr. Co.	5-22-57	0	16,319.90	0	Spec.Rd.
Total Awarded and Expended During Fiscal Year			$ 429,280.55	$ 391,041.22	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
B-4 STREETS - CAR TRACK REMOVAL					
California St. - Between Van Ness Ave. and Walnut St. (Track Removal & Pavement Reconstruction - Sewers) Chas. L. Harney, Inc.	9-14-55	4-6-56	$168,670.44	$ 27,570.44	1944 Sewer Bond 1947 Str. Bond Spec.Rd.
Stockton St. - Between South Portal of Tunnel & Columbus Ave. (Track Removal & Pavement Reconstruction - Widening) Chas. L. Harney, Inc.	5-9-56	1-3-57	136,392.15	122,792.15	1947 Str. Bond Spec.Rd. Muni R.R.
Columbus Ave. & North Point St. (Track Removal and Pavement Reconstruction) The Fay Impr. Co.	12-7-56	98%	270,096.90	213,690.00	1947 Str. Bond Spec.Rd. Muni R.R.
Fremont St. & First St. Between Market St. & Mission St. (Track Removal and Pavement Reconstruction) Eaton & Smith	12-12-56	2-15-57	38,044.17	38,044.17	Major Sts. Spec.Rd.
Washington St. & Steiner St. (Track Removal & Pavement Reconstruction) Eaton & Smith	1-9-57	96%	189,963.45	154,955.00	1954 Sewer Bond Spec.Rd. 1947 Str. Bond
Total Awarded and Expended During Fiscal Year			$498,104.52	$557,051.76	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C - TRAFFIC SIGNALS & CHANNELIZATION					
19th Ave. & Park-Presidio Blvd. Control Cable and Master Controller R. Flatland	12-21-55	7-23-56	$ 11,277.00	$ 4,602.00	General
Mission St. & Intersection South Van Ness Ave. Alemany Blvd. Intersection Ocean Ave. (Illuminated Traffic Signs) R. Flatland	4-13-56	9-14-56	1,665.00	1,665.00	Spec.Rd.
Traffic Signals at Isolated Crossings - Contract #14 (Installation) R. Flatland	5-9-56	10-31-56	46,772.45	41,522.45	Major Sts. Spec.Rd.
Guerrero St. and Camp St. (Modifying Master Traffic Signal Controller) R. Flatland	5-11-56	1-29-57	1,445.00	1,445.00	Spec.Rd.
Great Highway at Lincoln Way (Channelization) Chas. L. Harney, Inc.	6-27-56	5-6-57	110,053.03	110,053.03	Major Sts. Spec.Rd.
Portola Drive at Burnett Ave. (Modification of Traffic Signals) R. Flatland	9-14-56	12-12-56	3,149.30	3,149.30	Spec.Rd.
3rd St. Bridge Over Channel St. Waterway (Traffic Gate at N.E.Corner) Central Electric Co., Inc.	10-26-56	1-25-57	2,475.00	2,475.00	Major Sts.

South of Market St. Contract #2 Traffic Signals Abbett Electric Corp.	1-4-57	52%	87,528.00	36,960.00	Major Sts. Spec.Rd.
Mission St. & 13th St. - Modification of Traffic Signal Controller R. Flatland	1-9-57	5-16-57	2,630.40	2,630.40	Spec.Rd.
Post St. & O'Farrell St. - Between Presidio Ave. & Grant Ave. (Traffic Signals) R. Flatland	2-6-57	26%	155,800.00	34,935.00	Spec.Rd.
3rd St. - 4th St. - Mission Rock Intersection (Relocation of Traffic Signals - Installation) Marshall Elect. Co.	4-10-57	6-13-57	4,687.18	4,687.18	Spec.Rd.
South Van Ness & Mission St. - Illuminated Traffic Sign (Installation)	5-8-57	6-26-57	799.00	799.00	Spec.Rd.
Traffic Signals at Isolated Crossings - Contract #15 (Installation) R.Flatland	6-21-57	0	60,889.25	0	Major Sts. Spec.Rd.
Total Awarded and Expended During Fiscal Year			$317,958.13	$244,923.36	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE					
Lincoln Way Sewer - Between 39th Ave. & 48th Ave. (Construction) M. J. Lynch	10-14-55	8-28-56	$201,844.50	$ 38,049.50	1954 Sewer Bond
Glen Canyon Sewer - Portola Drive to Glen Park Playground (Sewers - Construction) The Fay Impr. Co.	3-30-56	9-28-56	120,608.57	60,683.57	1944 Sewer Bond
Lincoln Way Sewer Sec. "B" - 29th Ave. to Sunset Blvd. (Construction) Walter Lenkeit	4-6-56	2-28-57	214,041.50	188,371.50	1954 Sewer Bond
Stanley Drive Sewer Through S. F. State College (Reconstruction) McGuire & Hester	6-27-56	12-24-56	22,398.20	22,398.20	1933 Sewer Bond
North Point Collecting Sewers Sec. B-1 in Steuart St. (Construction) M & K Corp.	8-10-56	99%	178,400.00	152,310.00	1954 Sewer Bond
Lake St. Sewer Sec. "D" - Arguello Blvd. (Construction) M. J. Lynch	10-31-56	86%	117,985.00	86,615.00	1954 Sewer Bond
Anza-Geary Sewer System Sec. "A"- 14th Ave. - California St. to Lake St. (Construction) Wm. R. Cole	2-15-57	99%	42,408.50	31,725.00	1954 Sewer Bond

Barneveld Ave. - Oakdale Ave. to McKinnon Ave. (Construction Auxiliary Sewer) M. J. Lynch	4-26-57	0	19,130.00	0	1944 Sewer Bond 1954 Sewer Bond
Geary Blvd. Sewer - Presidio Ave. & 14th Ave. (Sewer Construction, Contract #1)	6-7-57	0	237,772.00	0	1954 Sewer Bond 1947 Str. Bond
Foerster St. - Los Palmos Drive & Teresita Blvd. (Construction of Sewer)	6-24-57	0	37,775.00	0	1954 Sewer Bond 1947 Str. Bond
Total Awarded and Expended During Fiscal Year			$633,470.50	$580,152.77	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
D-2 SEWERS - CONCRETE MONOLITHIC					
Southeast Collecting Sewers Section I-1 Candlestick Point Sewer Tunnel (Construction) M & K Corp.	5-25-55	5-3-57	$659,281.20	$350,901.20	1948 Sewage Tr.Bond 1954 Sewer Bond
Trocadero Sewer in Vicinity Sloat Blvd. & 19th Ave. (Deep Shaft Manhole) Arthur Wallgren	6-15-56	10-31-56	13,388.00	13,388.00	1948 Sewage Tr.Bond
McAllister St. - Buchanan St. to Laguna St. Guniting (Sewer - Gunite Lining) Cement Gun Construction Co.	8-22-56	10-26-56	7,085.00	7,085.00	General
North Point Collecting Sewers Sec. B-2 (Construction) Chas. L. Harney, Inc.	1-4-57	26%	459,181.00	91,885.00	1954 Sewer Bond
McAllister St. - Buchanan St. to Webster St. (Sewer Gunite Lining) Cement Gun Construction Co.	5-8-57	0	8,750.00	0	1944 Sewer Bond General
Total Awarded and Expended During Fiscal Year			$475,016.00	$463,259.20	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E - MISCELLANEOUS					
Laguna Honda Home - Turbine Generator Unit (Construction) Anderson & Rowe, Inc.	11-9-55	99%	$ 60,338.00	$ 51,200.00	1954 Laguna Honda Bond
Coroner's Office and Morgue (Reconstruction of) Beacon Constr. Co.	11-30-55	4-12-57	134,751.87	85,711.87	General
Laguna Honda Home Boiler and Related Facilities (Construction) Herman Lawson Co.	12-7-55	9-28-56	155,049.96	38,854.96	1954 Laguna Honda Bond
Air Raid Sirens - 27 - at Various Locations (Installation) Brayer Electric Co.	1-27-56	7-9-56	20,654.60	7,679.60	General
Southeast Sewage Treatment Plant Contract No. 2.06 (Stairs,Handrails,Ladders,etc.) Adam Arras & Son	2-10-56	9-21-56	17,170.00	14,545.00	1954 Sewer Bond
San Francisco Flower Terminal (Reconstruction of Curb) Chas. L. Harney, Inc.	2-15-56	8-23-56	5,753.90	5,753.90	Spec.Rd.
Richmond Sunset Sewage Treatment Plant - Additions and Betterments - Contr. No. 3.04 - Sludge Pumps,Gas Meter, Etc. (Installation) Scott Co.	3-14-56	2-8-57	13,990.00	13,990.00	1948 Sewage Tr.Bond

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E - MISCELLANEOUS (Continued)					
Southeast Collecting Sewers Sec. G-1-2-3 - Yosemite Pumping Station - Diversion Structure Force Main and Connecting Sewer (Construction) M & K Corp.	3-21-56	99%	$335,440.00	$295,035.00	1954 Sewer Bond
San Francisco Hospital Boiler Breechings (Construction) Ace Boiler & Welding Works	3-23-56	12-14-56	8,323.00	8,323.00	General
City Hall - West Half - Replace Hot Water Risers (Reconstruction) Robert M. Johnson	4-11-56	11-20-56	17,333.00	12,983.00	General
Civic Center Steam & Condensate Return Lines (Repairs) Rodoni Becker Co.	4-13-56	12-3-56	12,335.00	12,335.00	General
3rd & 4th St. Bridges - Over the Channel St. Waterway (Cleaning & Painting) Robert Thompson	5-4-56	7-17-56	14,557.00	6,307.00	Major Sts.
Broadway Tunnel West Ventilating Bldg. (Landscaping & Paving) The Lowrie Paving Co., Inc.	5-11-56	12-21-56	4,384.00	984.00	Spec.Rd.
Richmond Sunset Sewage Treatment Plant - Additions and Betterments - Contract No. 3.03 (Channel Gates) M. J. Lynch	5-31-56	11-28-56	11,450.00	11,450.00	1948 Sewage Tr.Bond

Richmond Sunset Sewage Treatment Plant Additions and Better- [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1948 Sewage Tr. Bond
County Jail No. 1 - at Washington St. & Dunbar Alley Installation of Heating & Ventilating System (Construction)	6-20-56	1-18-57	$ 8,714.00	$ 8,714.00	General
Civic Center Powerhouse (Conversion of Power Plant) Robert M. Johnson	6-20-56	12-12-56	13,266.00	13,266.00	General
Laguna Honda Home - Steel Water Storage Tank and Related Appurtenances (Construction) Pittsburgh Des Moines Steel Co.	6-22-56	99%	49,100.00	37,950.00	General
Portola Drive Widening - Dorchester Way & Rex Ave. (Test Borings) J. N. Pitcher	6-22-56	8-6-56	610.52	610.52	Spec.Rd.
Ocean Ave. Parking Lots - at 19th Ave. & Junipero Serra (Construction of Parking Lots) Pacific Pavements Co., Ltd.	6-29-56	1-10-57	10,109.75	10,109.75	1947 Parking Bond
Farmers' Market at Alemany Blvd.- Intercepting Drainage System The Lowrie Paving Co., Inc.	7-11-56	9-19-56	3,682.05	3,682.05	General
Hassler Health Home - Steel Water Storage Tank No. 2 (Construction) Erbentraut & Sommers	7-20-56	6-27-57	21,588.00	21,588.00	General
Southeast Sewage Treatment Plant- Paving and Lawn Sprinkling System Pacific Pavements Co., Ltd.	8-15-56	2-19-57	53,594.04	53,594.04	1948 Sewage Tr.Bond
Foerster St.Between Los Palmos Drive & Teresita Blvd. (Test Borings) P. & Z. Co.	8-22-56	9-25-56	274.50	274.50	Spec.Rd.

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E - MISCELLANEOUS (Continued)					
North Point Collecting Sewers Sec. B-2 (Test Borings) J. N. Pitcher	8-24-56	11-8-56	$ 4,152.50	$ 4,152.50	1954 Sewage Tr.Bond
City Hall - Main Electric Switchboard & Feeders (Installation) Central Electric Co.	8-29-56	1-29-57	62,675.58	62,675.58	General
Municipal Asphalt Plant Convenience Station (Construction) H. E. Rahlmann Co.	9-5-56	4-5-57	16,292.00	16,292.00	Spec.Rd.
North Point Sewage Treatment Plant - Additions & Betterments Modifying Existing Scum Troughs Contr. 2.02 (Reconstruction) Rodoni Becker Co., Inc.	9-5-56	11-20-56	5,221.00	5,221.00	1954 Sewer Bond
Marina Sewage Pumping Station - Outfall Gate and Access Hatch Walter Lenkeit	9-14-56	3-29-57	10,260.00	10,260.00	1944 Sewer Bond
Ingerson Ave. Slide - Intercepting Drainage System (Construction) Walter Lenkeit	9-21-56	1-3-57	21,637.00	21,637.00	Spec.Rd.
Bache St. Slide - Near Benton Ave. (Removal of Slide Material) E. J. Treacy	9-21-56	11-7-56	6,540.42	6,540.42	Spec.Rd.

Bache St. Slide - Near Benton Ave. (Removal of Slide Material)	9-21-56	11-7-56	6,540.42	6,540.42	Spec.Rd.
Burnham St. Slide - Between 24th St. & 25th St. Intercepting Drainage System Walter Lenkeit	9-21-56	1-7-57	14,931.92	14,931.92	Spec.Rd.
Union St. at Sansome St. - Remove Unstable Rock Chas. L. Harney, Inc.	10-3-56	1-25-57	2,674.10	2,674.10	Spec.Rd.
Controller's Office City Hall - Lighting Fixtures (Installation) Coopman Elect. Co.	10-26-56	1-16-57	4,794.00	4,794.00	General
Hunters Point Pumping Station - Retaining Wall (Construction) Hart & Hynding	10-31-56	4-10-57	18,905.20	18,905.20	1954 Sewer Bond
Fremont St. Near Market - Illuminated Sign (Installation) Abbett Electric Corp.	10-31-56	3-7-57	727.00	727.00	Spec.Rd.
Foerster St. - Los Palmos Drive & Teresita Blvd. - Ground Water Drainage System P. & Z.Co.	11-8-56	12-11-56	9,206.75	9,206.75	Spec.Rd.
Ingerson Ave. - Gravity Ground Water Cut-off Drain (Construction) P. & Z. Co.	11-8-56	1-22-57	12,115.56	12,115.56	Spec.Rd.
Lake Merced Sewer Trestle - New Supporting Members (Construction) J.C. Collins Co.	12-21-56	3-28-57	7,262.00	7,262.00	1944 Sewer Bond
Main Public Library - Cleaning Ventilation Ducts American Ventilator Service	1-4-57	3-29-57	3,065.00	3,065.00	General
8th Ave. - East of Ortega St. - Topping 2 Trees Warner Tree Service	1-4-57	3-20-57	240.00	240.00	Spec.Rd.

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E - MISCELLANEOUS (Continued)					
Steuart St. Near Market St. and at Broadway & Sansome St. Relocation of A.W.S.S. E. J. Treacy	1-4-57	4-3-57	$ 4,444.44	$ 4,444.44	State Highway
Farmers' Market - Additional Pavement in Parking Area (Construction) O.C.Jones & Son	2-13-57	4-2-57	4,290.00	4,290.00	General
City Hall Northeast Quadrant - Cleaning of Ventilating Ducts Chemical Exhaust Fire Protection Co.	2-15-57	4-9-57	1,290.00	1,290.00	General
Christmas Tree Point - Radio Communication Center (Construction) Herrero Bros, Inc.	3-6-57	30%	269,265.90	68,255.00	Spec.Rd. General
North Point Sewage Treatment Plant - Replacement of Ventilation Ducts Valley Sheet Metal Co.	3-6-57	38%	14,047.00	3,975.00	General
County Jail No. 2 - San Mateo Co. Furnishing & Installing Dampers Apex Sheet Metal Works	3-20-57	90%	2,805.00	1,875.00	General
Lake Merced Blvd. - Embankment Replacement (Earthquake Repair) Piombo Construction Co.	3-27-57	4-18-57	12,464.30	12,464.30	Spec.Rd.

Apex Sheet Metal Works	3-20-57	90%	2,805.00	1,875.00	General
Lake Merced Blvd. - Embankment Replacement (Earthquake Repair) Piombo Construction Co.	3-27-57	4-18-57	12,464.30	12,464.30	Spec.Rd.
Plant (Concrete Block Walls - Pre-Aeration & Sedimentation Bldg.) Balliet Bros.	3-29-57	7-2-57	1,865.00	1,865.00	1948 Sewage Tr.Bond
Great Highway Near Lincoln Way - Water Sprinkling System (Construction) Associated Engineers, Inc.	4-5-57	6-14-57	1,642.00	1,642.00	Spec.Rd.
City Hall - Hot Water Lines & Heat Exchanger (Replacement) H. Goldman & Son	4-10-57	80%	17,635.00	10,575.00	General
Newcomb Ave. - West of Phelps (Razing Shed) J. Henry Harris Co.	4-12-57	5-14-57	680.00	680.00	General
Civic Auditorium - Modernizing Electrical Facilities (Installation) Abbett Elect. Corp.	5-1-57	0	90,173.00	0	General
City Hall Fluorescent Lighting Fixtures - Superior Court (Installation) Dexter Electric	5-1-57	0	3,385.00	0	General
Portola Drive S/W - Santa Ana Ave. (Tree Removal) Warner Tree Service	5-8-57	6-19-57	198.00	198.00	Spec.Rd.
A.W.S.S. Relocation - Golden Gate Ave. & Franklin St. (Relocation of High Pressure System) Associated Pipe Lines, Inc.	5-8-57	0	3,475.00	0	State Highway
Richmond-Sunset Sewage Treatment Plant - Window Replacement (Reconstruction) H.E. Rahlmann Co.	5-8-57	40	5,656.00	0	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E - MISCELLANEOUS (Continued)					
Day St. - 30th St. & Sanchez St. (Reconstr. Curb & Sidewalk) Love & Haun	5-15-57	10%	$ 7,692.00	$ 0	Spec.Rd.
North Point Sewage Treatment Plant - Crane Service Platform & Stairs (Construction) H. E. Rahlmann Co.	5-15-57	0	2,782.00	0	1948 Sewage Tr.Bond
City Hall - Floodlights - Conduit & Wiring (Installation) Abbett Electric Corp.	5-22-57	0	28,418.00	0	General
Southeast Sewage Treatment Plant- Painting Water Tank & Tower (Painting & Repairing) C. R. Reichel	5-22-57	6-28-57	5,210.00	5,210.00	General
Southern Freeway Test Borings (Test Borings) Fred Pavlow, Inc.	6-7-57	0	20,632.50	0	1947 Str. Bond
North Point Sewage Treatment Plant - Standby Sand Pumps (Installation) Rodoni Becker Co.	6-7-57	0	14,159.00	0	1948 Sewage Tr.Bond
Central Fire Alarm Station Switchboard (Installation) Dahl Beck Electric Co.	6-14-57	0	4,320.00	0	General

El Camino Del Mar Over East Slide Area (Test Borings) J. N. Pitcher Co.	6-19-57	0	1,685.00	0	Spec.Rd.
Total Awarded and Expended During Fiscal Year			$798,052.76	$1,032,404.96	

APPENDIX II

BUREAU OF ARCHITECTURE
CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Construction
July 1, 1956 - June 30, 1957

Table	Type of Construction	Contracts No.	Awarded Aggregate Value	Amount Expende Fiscal Y 1956-195
A-1	New School Building Cons.	2	$2,311,811.00	$3,655,374.
A-2	Miscellaneous Alterations	18	436,368.62	528,732.
A-3	Acoustical Jobs	1	4,640.00	15,397.
A-4	Roofing Jobs	6	46,790.00	48,984.
A-5	Resilient Flooring	1	8,183.00	23,625.
A-6	Interior and/or Ext.Painting	9	131,989.00	245,004.
A-7	Yard Paving	8	22,238.98	111,759.
B-1	Fire Dept., New Construction	2	526,579.00	686,040.
B-2	Fire Dept., Reconstruction	3	250,177.00	204,025.
C-1	San Francisco Hospital	12	578,665.46	730,774.
C-2	Laguna Honda Home	4	682,292.00	2,026,937.
C-3	Health Center Building	1	2,748.00	2,748.
D	M. H. deYoung Memorial Mus.	4	25,756.00	20,116.
E	Misc. Test Bor.& Soil Anal.	4	11,537.50	7,965.
F	Youth Guidance Center	4	123,086.00	78,436.
G	Miscellaneous	19	3,922,305.63	1,338,967.
	TOTALS	98	$9,085,167.19	$9,724,888.

On the following pages appear separate tables of current contrac for each of the types of construction listed above. The source of th funds used to finance each project is indicated in the tables accordi to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
1948 School	Unified School District, bond issue voted by citizens on November 2, 19 $48,890,000.00
1952 Fire	Fire Department, bond issue voted b citizens on November 4, 1952, $4,750,000.00.
1954 Hospital	Hospital, bond issue voted by citizens on November 2, 1954, $5,830,000.00.

1954 L.H.H.	Laguna Honda Home, bond issue voted by citizens on November 2, 1954, $5,475,000.00.
1954 Juv. Home	Juvenile Home and Court, bond issue voted by citizens on November 7, 1944, $1,250,000.00.
1948 Juv. Ct.	Juvenile Court and Detention Home, Bond issue voted by citizens on June 1, 1948, $2,750,000.00.
954 Ex. Hall	Civic Center Exhibit Hall bond issue voted by citizens on November 2, 1954, $3,275,000.00.
956 Justice	New Hall of Justice bond issue voted by citizens on June 5, 1956, $19,475,000.00.

CURRENT CONTRACT DATA 1956-1957

Description : Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-1 NEW SCHOOL BUILDING					
Funston-Santiago JHS (Herbert Hoover JHS) (1071)					
James I. Barnes Const. Co.	5-14-54	6-11-56	$2,408,947.66	$279,442.66	
Anderson & Rowe, Inc.	5-14-54	11-[illegible]	400,307.42	65,245.49	
Emil J. Weber Electric Co.	5-14-54	9-15-56	163,226.64	24,723.64	1948 School
Commodore Stockton Elementary School (1300)					
Henderson Construction Co.	6-1-55	1-20-57	478,171.26	341,563.26	
James A. Nelson Co.	6-1-55	1-16-57	90,270.55	40,824.55	
Emil J. Weber Electric Co.	6-1-55	1-25-57	21,462.58	19,072.58	1948 School
Luther Burbank JHS (1354)					
F & A Corporation	11-9-55	90%	2,216,000.00	1,163,111.00	
James A. Nelson Co.	11-9-55	90%	410,980.00	254,010.00	
Scott-Buttner Elec.Co., Inc.	11-9-55	90%	196,460.00	126,969.00	1948 School
Hunterspoint No. 2 Elementary School (1391-2)					
J. J. Amoroso Const. Co.	4-18-56	84%	978,828.00	544,959.00	
Herman Lawson Co.	4-18-56	93%	163,287.00	133,380.00	
Hampton Electric & Mfg. Co.	4-18-56	83%	36,200.00	24,130.00	1948 School
Silver Avenue JHS (1415)					
Rothschild, Raffin & Weirick	11-9-56	28%	1,724,500.00	443,918.22	
Herman Lawson Co.	11-9-56	31%	344,483.00	86,452.65	
Emil J. Weber Electric Co.	11-9-56	13%	132,289.00	11,495.11	General
Commodore Stockton Elementary School, Addition No. 2 (1483)					
Peter Sartorio	4-17-57	10%	110,539.00	0	1948 School
Total Awarded and Expended During Fiscal Year			$9,311,811.00	3,555,374.16	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-2 MISCELLANEOUS ALTERATIONS					
Aptos JHS (1378) (New Windows & Ext. Paint.) Beacon Construction Co.	4-4-56	11-14-56	$81,063.96	$81,063.96	General
Commodore Sloat School (1383) (New Windows & Ext. Paint.) Beacon Construction Co.	4-4-56	11-14-56	51,332.35	51,332.35	General
(Heating Plant Conversions) Excelsior, Francis Scott Key, Marshall, Sanchez, & Sunshine Elem. Schools (1419) Robert M. Johnson	5-16-56	11-6-56	77,747.00	77,747.00	1948 School
George Peabody School (1426) (Ext. Reconstruct. Work and New Windows) William McIntosh & Son	6-13-56	10-30-56	72,197.33	72,197.33	1948 School
Junipero Serra School (1427) (New Windows & Ext. Repairs) William McIntosh & Son	6-13-56	11-16-57	66,523.80	66,523.80	1948 School
Horace Mann JHS & Everett JHS (1428) (Alter. Home Making Labs.) L. J. McDermott	6-13-56	10-2-56	21,791.00	21,791.00	1948 School
(Portable Classroom Relocation) Burnett School to John Swett School (1429) William McIntosh & Son	6-15-56	9-21-56	15,325.97	15,325.97	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-2 MISCELLANEOUS ALTERATIONS (continued)					
Portola JHS (1436) (Alter. Home Making Lab.) Stenmark Construction Co.	7-25-56	1-9-57	$ 8,450.00	$ 8,450.00	General
Presidio JHS (1441) (Alter. Home Making Lab. & Acoustical Treatment) Leon Carlon	8-29-56	12-28-56	9,073.00	9,073.00	General
Daniel Webster Elem. School (1434-R) (Roof Patch. & Misc. Work) L. J. McDermott	9-14-56	11-21-56	4,578.00	4,578.00	General
Burnett Elem. School (1451) (Int. Paint. & Resil.Floor) Stenmark Construction Co.	10-19-56	2-1-57	11,895.00	11,895.00	General
(Portable Classroom Relocation) Eucalyptus Dr. near 23rd Ave. to Jose Ortega School Site, Ramsel St. near Shields St. (1447) William McIntosh & Son	11-7-56	3-8-57	49,759.00	49,759.00	General
Herbert Hoover JHS (Funston-Santiago JHS) Project No. 14 (1471) (Mechanical Work) Ace Boiler and Welding Works	11-23-56	12-31-56	3,739.62	3,739.62	General
City College of San Francisco (1474) (Science Bldg., New Electric Passenger Elevators)	1-11-57	50%	35,104.00	0	1948 School

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-2 MISCELLANEOUS ALTERATIONS (continued)					
James Lick JHS (1479) (Removal of Stone to Correct Earthquake Hazard) Dee Engineering Co.	1-18-57	3-15-57	$ 8,618.00	$ 8,618.00	General
(Portable Classroom Relocation) Lake Merced School to A. Jackson and Paul Revere Schools (1478) William McIntosh & Son	2-6-57	5-3-57	21,138.00	21,138.00	General
Polytechnic High School (1470) (Electronic Laboratory) Leon Carlen	2-27-57	82%	47,140.00	25,500.00	1948 School
City College of San Francisco (1484) (Lab. Alter., Science Bldg.) Arthur W. Baum	4-26-57	10%	78,482.00	0	1948 School
John Swett Elem. School (1506) (Window Replacement) L. J. McDermott	5-8-57	9%	19,981.00	0	General
Commodore Sloat Elem. School (1515) (New Gutters & Toilet Rm. Alt.) L. J. McDermott	5-22-57	55%	12,075.00	0	General
Galileo High School (1519) (Alter. Food Lab., Sew. Lab., & Counsel. Offices) H. E. Rahlmann	5-29-57	5%	27,627.00	0	1948 School

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completion Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-2 MISCELLANEOUS ALTERATIONS (continued)					
James Lick JHS (1514) (Ext. Alter. & Window Replace.) Adam Arr[illegible] & Son	5-29-57	5%	$ 55,985.00	0	General
(Heating Plant Conversions) Balboa HS, Lincoln, Sherman-Gough Div., Admn. Bldg., Everett JHS, Adams, Roosevelt, B. Franklin JHS, Louise Lombard, Lowell HS, Lawton, Portola JHS, Sunnyside, & Glen Park Schools (1513-R) Robert W. Johnson	6-5-57	5%	23,871.00	0	1948 School
John O'Connell Vocation. School (1516) (Kitchen & Plumb. Shop. Alter.) William McIntosh & Son	6-19-57	0	5,797.00	0	General
Visitacion Valley Elem. School (1529) (Kitchen Alterations) Stenmark Construction Co.	6-28-57	0	13,156.00	0	1948 School
Total Awarded and Expended During Fiscal Year			$436,368.62	$528,732.03	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-3 ACOUSTICAL JOBS					
Argonne Elementary School (1390) (Acoustical Treatment Work, Reconstruction) The Brookman Co., Inc.	5-16-56	8-21-56	$10,757.00	$10,757.00	1948 School
City College of San Francisco (1463) (Acoustical Treatment Work, Men's Gymnasium) Western Asbestos Co.	11-7-56	1-11-57	4,640.00	4,640.00	General
Total Awarded and Expended During Fiscal Year			$4,640.00	$15,397.00	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-4 ROOFING JOBS					
Board of Education, Re-roofing Portion of Administration Building (1405) Regal Roofing Co.	4-18-56	9-14-56	$ 15,040.15	$ 15,040.15	General
Bayview Elementary School (1412) (Re-roofing) Regal Roofing Co.	5-2-56	8-9-56	3,887.00	3,887.00	General
Starr King Elementary School (1413) (Re-roofing) Regal Roofing Co.	5-2-56	8-2-56	4,037.00	4,037.00	General
Luther Burbank Junior High School (1431) (Re-roofing and patching) Anchor Roofing Co.	6-29-56	1-11-57	6,163.00	6,163.00	General
Portola Junior High School (1442) (Re-roofing) Anchor Roofing Co.	8-10-56	10-19-56	4,703.00	4,703.00	General
Glen Park School (1433) (Re-roofing) Anchor Roofing Co.	8-10-56	12-27-56	11,761.00	11,761.00	General
Presidio Junior High School (1443) (Re-roofing Shop Building) Anchor Roofing Co.	8-24-56	11-9-56	3,393.00	3,393.00	General
Paul Revere School Annex (1520) (Re-Roofing) Regal Roofing Co., Inc.	6-5-57	1%	3,387.00	0	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
Sherman School (1528) (Re-roofing) San Francisco Roofing Co.	6-19-57	0%	$ 7,339.00	0	General
James Lick JHS (1525) (Reroof. & weatherproofing) Regal Roofing Co.	6-26-57	0	16,207.00	0	General
Total Awarded and Expended During Fiscal Year			$46,790.00	$48,984.15	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-5 RESILIENT FLOORING					
City College of San Francisco, Science Building (1418) (Resilient Flooring) L. D. Reeder Co. of San Francisco	5-23-56	8-13-56	$ 7,839.94	$ 7,839.94	General
Polytechnic High School, Shop Building (1430) (Floor Reconstruction) R. E. Kahlmann Co.	6-15-56	12-5-56	15,786.00	15,786.00	General
Anza School (1527) (Cafeteria Reflooring & Baseboard Renewal) Wm. McIntosh & Son	6-26-57	0	8,183.00	0	General
Total Awarded and Expended During Fiscal Year			$8,183.00	$23,625.94	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-6 INTERIOR AND/OR EXTERIOR PAINTING					
Fairmount Elementary School (1388) (Interior Painting) R. P. Paoli & Co.	3-23-56	8-27-56	$13,940.00	$13,940.00	General
Dudley Stone Elementary School (1391) (Interior & Exterior Painting) Dave Russ	4-4-56	8-27-56	21,988.00	21,988.00	General
Edward Robeson Taylor Elementary School (1394) (Interior & Exterior Painting) J. Wm. Sorensen	4-4-56	8-27-56	21,397.00	21,397.00	General
Alamo Elementary School (1389) (Interior Painting) Dave Russ	4-4-56	8-27-56	14,445.00	14,445.00	General
Abraham Lincoln High School (1393) (Interior Painting) R. P. Paoli & Co.	4-18-56	8-22-56	26,840.00	26,840.00	General
Jedediah Smith Elementary School (1399) (Interior & Exterior Painting) Martin Fried, Inc.	4-18-56	8-3-56	9,149.00	4,673.00	General
Monroe Elementary School (1392) (Interior Painting) A. Quandt & Sons, Inc.	4-18-56	8-27-56	12,200.00	12,200.00	General
George Washington High School (1396) (Interior Painting) Deemer & Deemer, Inc.	5-2-56	8-22-56	68,299.00	68,299.00	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
McKinley Elementary School (1502) (Interior Painting) Robert G. Meyer	5-2-56	8-22-56	$ 11,221.00	$ 11,221.00	General
Cabrillo Elementary School (1398) (Interior & Exterior Painting) Dave Russ	5-16-56	8-22-56	12,760.00	12,760.00	General
Board of Education, Administration Building (1424) (Exterior Painting and Cleaning) D. Zelinsky & Sons	5-23-56	11-1-56	35,500.00	35,500.00	General
(Various Schools - Painting Game Lines) Edison, McKinley, & Jefferson Schools (1504) Riley's Striping Service	4-3-57	0	350.00	0	General
Argonne School (1457) (Interior Painting) M. A. Vidal Painting Co.	4-5-57	35%	12,280.00	0	General
Commodore Sloat School (1494) (Interior Painting) M. A. Vidal Painting Co.	4-5-57	14%	17,270.00	0	General
Bryant School (1501) (Interior & Exterior Painting) New Method Paint. & Dec. Co.	4-17-57	40%	18,217.00	0	General

CURRENT CONTRACT DATA 1956=1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
LeConte School (1507) (Interior Painting) W. G. Thompson	4-26-57	30%	$22,805.00	0	General
Junipero Serra School (1509) (Interior Painting) Martin Fried	5-8-57	18%	11,375.00	1,741.00	General
Sherman School (1508) (Interior & Exterior Painting) Fulton Painting Co.	5-8-57	25%	23,720.00	0	General
Winfield Scott School (1512) (Interior & Exterior Painting) Deemer & Deemer	5-8-57	25%	14,646.00	0	General
George Peabody School (1511) (Interior Painting) Haney & Robertson	5-8-57	25%	10,826.00	0	General
Total Awarded and Expended During Fiscal Year			$131,989.00	$245,004.00	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-7 YARD PAVING					
City College of San Francisco (1370) (Asphaltic Concrete & Rock Base Pavement, Student Parking Areas Nos. 2 & 3) Fay Improvement Co.	12-21-55	7-24-56	145,796.84	223,815.84	1948 School
Bayview Elementary School (1414) (Yard Paving) Pacific Pavements Co., Ltd.	5-16-56	9=28-56	34,600.00	34,600.00	1948 School
Frank McCoppin Elementary School (1417) (Yard Paving) The Fay Improvement Co.	5-23-56	9-24-56	26,280.00	26,280.00	1948 School
Sheridan Elementary School (1397) (Yard Paving) Pacific Pavements Co., Ltd.	6-13-56	9-28-56	12,960.00	12,960.00	1948 School
City College of San Francisco (1453-[illegible]) (Asphaltic Concrete & Rock Base Paved Walks) C. C. Jones & Sons	10-12-56	11-23-56	4,326.00	4,326.00	1948 School
Burnett School (1451) (Sheet Asphalt Yard Paving) The Fay Improvement Co.	10-19-56	4-24-57	767.98	767.98	General
Edison School (1497) (Resurfacing Yard Paving, Light Application) Malott & Peterson-Grundy	3-27-57	5-7-57	1,978.00	1,978.00	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
A-7 YARD PAVING (Continued)					
Columbus School (1498) (Resurface Yard Paving, Light Application) Malott & Peterson-Grundy	3-27-57	5-2-57	$ 1,495.00	$1,495.00	General
John Muir School (1499) (Resurface Yard Paving, Light Application) West Coast Roofing Co.	3-27-57	5-28-57	1,763.00	1,763.00	General
Jefferson School (1503) (Resurfacing Yard Paving, Heavy Application) Malott & Peterson-Grundy	4-3-57	5-2-57	1,947.00	1,947.00	General
McKinley School (1502) (Resurfacing Yard Paving, Heavy Application) Malott & Peterson-Grundy	4-3-57	5-7-57	1,787.00	1,787.00	General
(Various Schools - Resurfacing Yard Paving, Heavy Application) Geary, Grant, Grattan, LeConte, Dudley Stone (1532) Malott & Peterson-Grundy	6-28-57	0	8,175.00	0	General
Total Awarded and Expended During Fiscal Year			$22,238.98	$111,759.82	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
B-2 FIRE DEPARTMENT - NEW CONSTRUCTION					
Engine House No. 45, Project 11 (1351) (General Construction, Plumbing, Mechanical, and Electrical Work) Antone Petersen & Sons	10-14-55	2-28-57	$135,037.83	$ 95,486.83	1952 Fire
Engine House No. 12, Project 2 (1355) (General Construction, Plumbing, Mechanical, and Electrical Work) M & K Corporation	12-14-55	2-22-57	377,022.53	317,893.53	1952 Fire
Engine House No. 38, Project 20 (1435) (General Construction, Plumbing, Mechanical, and Electrical Work) M & K Corporation	8-22-56	92%	264,700.00	200,664.00	1952 Fire
Engine House No. 13, Project 3 (1449) (General Construction, Plumbing, Mechanical, and Electrical Work) S. J. Amoroso Construction Co.	11-30-56	44%	261,789.00	71,996.00	1952 Fire
Total Awarded and Expended During Fiscal Year			$526,579.00	$686,040.36	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
B-3 FIRE DEPARTMENT - RECONSTRUCTION					
Engine House No. 41, Project 109 (1365) (General Construction, Plumbing, Mechanical, and Electrical Work) Peter Sartorio	3-9-56	3-8-57	$142,655.56	$142,655.56	1952 Fire
Engine House No. 47, Project 118 (1452) (General Construction, Plumbing, Mechanical, and Electrical Work) Beacon Construction Company	10-31-56	99%	54,471.00	47,832.00	1952 Fire
Engine House No. 4, Project 112 (1377) (General Construction, Plumbing, Mechanical, and Electrical Work) Clovis Construction Co.	3-8-57	21%	194,520.00	13,538.00	1952 Fire
Engine House No. 12, Project 2 (1510-R) (Gasoline Dispensing Pumps) Cooper Bros., Inc.	6-12-57	0	1,186.00	0	1952 Fire
Total Awarded and Expended During Fiscal Year			$250,177.00	$204,025.56	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C-1 DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital					
Alter. Main Kitchen Dishwashing, Service Bldg. 6 (1335) William McIntosh & Son	6-8-55	8-23-56	$17,504.08	$ 4,113.08	General
Alter.. for New Elevators & Stair Enclosures, TB Group (1352) Hart & Hynding, Inc.	10-14-55	11-1-56	103,064.05	28,545.05	General
Exit Stairways, Ward Bldgs. 10, 20, 30 and 40 (1366) Monson Bros.	1-2-56	11-2-56	131,316.54	67,193.54	1954 Hosp.
New Incinerator & Related Wk., Service Bldg. 2 (Morgue) (1384) Plibrico Sales Service	3-9-56	10-23-56	14,995.00	14,995.00	1954 Hosp.
Instal. Duplex Select. Collect. Control, A&B Elevators, Ward Bldgs. 10, 20 & 40 (1382) Pacific Elevator & Equip. Co.	3-9-56	1-8-57	63,009.65	51,346.65	1954 Hosp.
Garbage Can Wash. Facilities, Central Kitchen Stores, Bldg. 6 (1385) Arthur W. Baum	3-23-56	9-21-56	3,972.00	3,972.00	General
Instal. Duplex Select. Collect. Control System. A&B Elevators, Ward Bldg. 30 (1409) Pacific Elevator & Equip. Co.	4-11-56	1-8-57	24,912.55	24,912.55	1954 Hosp.

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C-1 DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital (continued)					
Salvage. Refuse Stge. Bldg. (1387) William McIntosh & Son	4-11-56	8-3-56	$ 3,777.00	$ 3,777.00	1954 Hosp.
Alter. Bakery & Vegetable Prep. Room (1406) Hart & Hynding, Inc.	4-25-56	3-26-57	62,006.76	62,006.76	General
Alter. Admit. Ward & Social Service (1381) Beacon Construction Co.	4-27-56	78%	253,822.00	167,495.00	1954 Hosp.
Alter. Maternity Bldg. 80 (1425) Rothschild, Raffin & Weirick	6-20-56	64%	819,990.00	198,761.00	1954 Hosp.
Elevator Wk. for Alter. to Maternity Bldg. 80 (1437) Westinghouse Electric Corp.	8-1-56	57%	61,346.00	26,775.00	1954 Hosp.
Clean. Ventilat. System & Related Equip., Serv.Bldg. 1 (1439) American Fire Protection Service dba Chemical Exhaust Fire Protection Co. of North. Calif.	8-15-56	10-24-56	2,222.22	2,222.22	General
Reroof. Laundry Bldg. & Connect. Passages (1458) Western Roofing Service	10-24-56	1-2-57	4,744.00	4,744.00	General
Alter. Special Diet Lab. (1444) Rothschild, Raffin & Weirick	11-28-56	99%	31,729.00	18,614.00	1954 Hosp.

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C-1 DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital (Continued)					
Alter. & Add. to Cold Storage Facilities (1438) Stenmark Construction Co.	12-5-56	80%	$37,200.00	$27,193.00	1954 Hosp.
Alter. X-Ray Develop. Rm. (1473) H. E. Rahlmann Co.	1-25-57	4-19-57	11,089.00	11,089.00	1954 Hosp.
Resurfac. Access Roads (1482) O. C. Jones & Sons	2-15-57	4-5-57	4,687.00	4,687.00	General
Elevator #90-B Convert DC to AC Psych. Bldg. 90 (1480-R) Otis Elevator Company	3-8-57	10%	4,289.24	0	General
Misc. Roof Rprs., Morgue Bldg. (1489) William McIntosh & Son	3-29-57	6-28-57	8,333.00	8,333.00	General
Elevator #90-A Convert DC to AC, Psych. Bldg. 90 (1481) Westinghouse Electric Corp.	4-5-57	25%	6,497.00	0	General
TB Bldg. Modern., Proj. IV, Phase B (1500) William McIntosh & Son	6-7-57	0%	404,124.00	0	General
Fire Road Lighting, TB Bldg. Area (1523) Brayer Electric Company	6-12-57	0%	2,405.00	0	General
Total Awarded and Expended During Fiscal Year			$578,665.46	$730,774.85	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956=1957	Fund
C-2 DEPARTMENT OF PUBLIC HEALTH Laguna Honda Home					
Alterations to Main Kitchen, Bakery, & Commissary (1290) Beacon Construction Co.	3-11-55	11-23-56	$279,260.97	$ 90,730.97	1954 LHH General
Elevators, Connecting Corridors, & Related Work, Project 3 (1357) Hart & Hynding, Inc.	11-4-55	2-1-57	373.093.83	225,150.83	1954 LHH
Demolition of Farm Group Buildings (1402) Flora Crane Service, Inc.	6-13-56	7-20-56	5,369.00	5,369.00	General
Alterations to Clarendon Hall, Project 1 (1380) Rothschild, Raffin & Weirick	6-20-56	72%	1,423,760.00	836,256.00	1954 LHH
Alterations to Ward Bldg. "A" Staff Offices & Related Work, Project 6 (1408) Rothschild, Raffin & Weirick	6-22-56	99%	243,700.00	206,870.00	1954 LHH
Alterations & Additions to Power Plant & Related Work Project No. 2 (1422) Rothschild, Raffin & Weirick	6-27-56	97%	417,239.00	338,586.00	1954 LHH
Roads, Parking Areas & Service Buildings, Project 4 (1423) Hart & Hynding, Inc.	8-8-56	86%	466,431.00	323,975.00	1954 LHH

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C-2 DEPARTMENT OF PUBLIC HEALTH Laguna Honda Home (continued)					
Alterations to Ward Building "B" and Related Work (1505) Rothschild, Raffin & Weirick	5-15-57	4%	$161,800.00	0	General
Painting Wards "A" & "B" (1526) A. Quandt & Sons	6-14-57	0	17,840.00	0	General
Resilient Flooring Wards "A" and "B" (1524) The Brookman Co., Inc.	6-14-57	0	36,221.00	0	General
Total Awarded and Expended During Fiscal Year			$682,292.00	$2,026,937.80	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
C-3 DEPARTMENT OF PUBLIC HEALTH Health Center Building					
Health Center Building, (Exterior Painting (1446) Raphael Company	9-7-56	11-21-56	$ 2,748.00	$ 2,748.00	General
Total Awarded and Expended During Fiscal Year			$ 2,748.00	$ 2,748.00	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
D - M. H. deYOUNG MEMORIAL MUSEUM					
Security Wire Fence (1403) Colorado Fuel & Iron Corp. Pacific Coast Division	4-6-56	8-22-56	$ 580.00	$ 580.00	General
Refinishing Wood Flooring in Galleries 29 and 33 (1448) Inlaid Floor Co.	8-24-56	9-12-56	740.00	740.00	General
Storage Racks of Paintings (1456) Michel & Pfeffer Iron Works, Inc.	10-17-56	1-15-57	2,495.00	2,495.00	General
New Oakes Gallery (1486) Oscar Presco & Son	3-22-57	60%	14,532.00	8,312.00	General
Skylighting and Roofing Alterations (1490) William McIntosh & Son	3-27-57	6-5-57	7,989.00	7,989.00	General
Total Awarded and Expended During Fiscal Year			25,756.00	20,116.00	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
E MISCELLANEOUS TEST BORINGS & SOIL ANALYSES					
Engine House No. 13, Project 3 Abbot A. Hanks, Inc.	1-23-57	3-22-57	$ 1,147.50	$ 1,147.50	1952 Fire
New Hall of Justice Bldg. Brewer & Associates	2-15-57	7-18-57	7,350.00	4,417.50	1956 Justice
Purchaser's Consolidated Shop Dames & Moore	5-17-57	6-14-57	2,400.00	2,400.00	General
Engine House No. 21, Project 5 Brewer & Associates	6-14-57	7-29-57	640.00	0	1952 Fire
Total Awarded and Expended During Fiscal Year			$11,537.50	$7,965.00	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
F YOUTH GUIDANCE CENTER					
Alterations & Additions to Wire Fencing (1404) Wulfert Co., Inc.	4-18-56	8-6-56	$10,876.00	$ 10,876.00	1944-48 Juv. Ct.
Closet Doors & Misc. Reprs.(1400-R) William McIntosh & Son	5-11-56	9-21-56	2,966.00	2,966.00	General
Log Cabin Ranch School for Boys, San Mateo County (Recreation Hall - Project No. 1) (1373) Antone Petersen & Sons	5-16-56	12-7-56	52,980.56	52,980.56	General
Log Cabin Ranch School for Boys, San Mateo County (Boiler Room Alteration) (1461) Antone Petersen & Sons	11-9-56	3-1-57	4,755.00	4,755.00	General
Log Cabin Ranch School for Boys, San Mateo County (Hog Pens & Drainage System for Livestock Facilities) (1495) Power, Mullin & Richardson Constr. Co., Inc.	4-10-57	99%	4,693.00	0	General
Exterior Paint. & Miscel. Work (1472-R) Eugene Stekler	4-10-57	59%	26,895.00	6,859.00	General
Log Cabin Ranch School for Boys, San Mateo Co. (General Const. of Dormitory, Proj. No.2) (1492) Peter Sartorio	6-5-57	0	86,743.00	0	General
Total Awarded and Expended During Fiscal Year			$123,086.00	$78,436.56	

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
G-MISCELLANEOUS					
45 Hyde Street, Miscellaneous Alterations & Painting (1386) Stenmark Construction Co.	3-9-56	7-5-56	$ 2,799.00	$ 2,779.00	General
War Memorial Veterans' Bldg., Alterations to Basement Meet. Room (1379) Stenmark Construction Co.	3-16-56	10-5-56	18,527.00	18,527.00	General
War Memorial Veterans' Bldg., Miscellaneous Alterations for New Rental Gallery Lounge, SF Museum of Art (1407) Stenmark Construction Co.	4-25-56	10-12-56	2,684.20	1,730.20	General
150 Otis Street, Fire Doors (1416) William McIntosh & Son	5-11-56	10-24-56	5,527.00	5,527.00	General
California Palace of Legion of Honor, Alterations, Phase II (1411) Antone Petersen & Sons	6-20-56	3-20-57	76,512.53	76,512.53	General
San Francisco Civic Center Exhibit Hall (1440) Theo. G. Meyer & Sons	8=29-56	36%	3,711,315.00	1,152,751.00	1934 Ex. Hall
California Academy of Sciences Installation of Robert Howard Whale Statue in Courtyard (1140-R2) Erbentraut & Summers	8-31-56	99%	17,746.00	14,814.00	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
G-MISCELLANEOUS (Continued)					
Civic Auditorium Tile Flooring, 2nd Floor Corridor (1445) F. K. Pinney, Inc.	9-14-56	1-16-57	$ 3,177.00	$ 3,177.00	General
Civic Auditorium New Drain Piping from Roof (1455-R) Broadway Plumbing Co.	11-9-56	2-1-57	4,869.00	4,869.00	General
Department of Public Works Office Alterations, Bureau of Accounts, Maintenance Yard (1464) William McIntosh & Son	11-16-56	5-23-57	5,871.31	5,871.31	General
Taraval Police Station Exterior Painting (1460) Robert A. Thompson	11-21-56	2-15-57	953.00	953.00	General
Richmond Police Station Exterior Painting (1459) Robert A. Thompson	11-21-56	2-15-57	884.00	884.00	General
150 Otis Street Building Roofing & Miscellaneous Painting & Repairs (1467) Lewis J. McDermott	11-21-56	2-1-57	3,130.00	3,130.00	General
Fire Department Pump Station No. 2 Exterior Painting and Miscellaneous Work (1466) Adam Arras & Son	11-28-56	3-12-57	7,853.00	7,853.00	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
G-MISCELLANEOUS (Continued)					
Sunset Branch Library and Richmond Branch Library, Window Alterations (1468) Stenmark Construction Co.	12-5-56	5-17-57	$ 9,227.00	$ 9,227.00	General
Fire Department Pump Station No.1 Exterior Painting and Miscellaneous Work (1465) Robert A. Thompson	12-7-56	3-29-57	5,987.00	5,987.00	General
County Jail No. 2, San Mateo Co. Re-roof, and Roof Repairs at County Jails Nos. 1 & 3 (1462-R) Western Roofing Service	12-14-56	3-29-57	9,341.00	9,341.00	General
Civic Auditorium, Office Alterations (1477) Wm. McIntosh & Son	2-1-57	4-18-57	3,942.32	3,942.32	General
City Hall, Additions to Handrails (1488) C. E. Toland & Son	3-13-57	5%	4,765.00	0	General
Merced Branch Library, General Construction of (1487) Leon Carlen	4-5-57	32%	115,214.00	11,092.00	General
Civic Auditorium, Elevator Repairs (1517) Independent Elevator Co., Inc.	5-17-57	0%	1,200.00	0	General

CURRENT CONTRACT DATA 1956-1957

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1956-1957	Fund
G-MISCELLANEOUS (Continued)					
City Hall, Public Administrator Office Alterations, Superior Court Dept., Jury Room Alterations (1491) Stenmark Construction Co.	6-5-57	0%	$10,911.00	0	General
Veterans Memorial Bldg., Renewal of Ceiling Panels, SF Museum of Art (1522) F. K. Pinney, Inc.	6-7-57	0%	1,942.00	0	General
Civic Auditorium, Alterations to Exit Doors (1493) Wm. McIntosh & Son	6-7-57	1%	3,978.00	0	General
Total Awarded and Expended During Fiscal Year			$3,922,305.63	$1,338,967.36	

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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1958

DOCUMENTS DEPT.

1959

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ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF SAN FRANCISCO

FISCAL YEAR ENDING JUNE 30, 1958

GEORGE CHRISTOPHER	MAYOR
THOMAS A. BROOKS	CHIEF ADMINISTRATIVE OFFICER
SHERMAN P. DUCKEL	DIRECTOR OF PUBLIC WORKS

CITY HALL

VAN NESS AVENUE ENTRANCE

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I - Current Contract Data, Bureau of Engineering

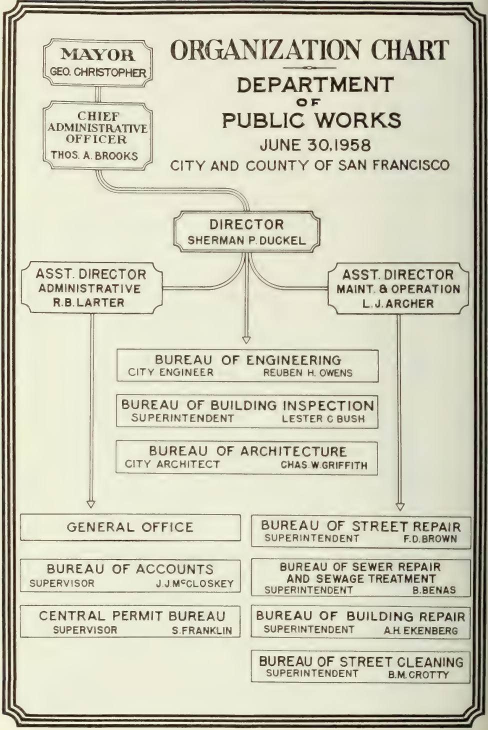
II - Current Contract Data, Bureau of Architecture

ORGANIZATION CHART

DEPARTMENT OF PUBLIC WORKS

JUNE 30, 1958

CITY AND COUNTY OF SAN FRANCISCO


MAYOR
GEO. CHRISTOPHER
CHIEF ADMINISTRATIVE OFFICER
THOS. A. BROOKS
DIRECTOR
SHERMAN P. DUCKEL
ASST. DIRECTOR
ADMINISTRATIVE
R.B. LARTER
ASST. DIRECTOR
MAINT. & OPERATION
L. J. ARCHER
BUREAU OF ENGINEERING
CITY ENGINEER REUBEN H. OWENS
BUREAU OF BUILDING INSPECTION
SUPERINTENDENT LESTER C BUSH
BUREAU OF ARCHITECTURE
CITY ARCHITECT CHAS. W. GRIFFITH
GENERAL OFFICE
BUREAU OF ACCOUNTS
SUPERVISOR J. J. McCLOSKEY
CENTRAL PERMIT BUREAU
SUPERVISOR S. FRANKLIN
BUREAU OF STREET REPAIR
SUPERINTENDENT F. D. BROWN
BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
SUPERINTENDENT B. BENAS
BUREAU OF BUILDING REPAIR
SUPERINTENDENT A.H. EKENBERG
BUREAU OF STREET CLEANING
SUPERINTENDENT B.M. CROTTY

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS

OFFICE OF THE
DIRECTOR OF PUBLIC WORKS

260 CITY HALL
SAN FRANCISCO 2,
CALIFORNIA

March 2, 1959

Annual Report
1957-1958

Honorable Sherman P. Duckel
Chief Administrative Officer
City and County of San Francisco

Dear Mr. Duckel:

The annual report of the Department of Public Works for the fiscal year ending June 30, 1958, is respectfully submitted herewith in accordance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

Each one of the nine Bureaus efficiently performed its assigned functions in the over-all operation of the Department and a detailed report of their activities will be found herein. The Appendices contain a summary of data pertaining to current construction contracts administered by the Bureaus of Architecture and Engineering.

The past year showed a drop of 14% in the value of contracts awarded, with 206 contracts valued at $13,236,279 as compared to the 1956-1957 totals of 212 contracts worth $15,401,266.

As evidence of the faith which private capital has in the growth of San Francisco, there were 11,207 building permits issued whose estimated cost of construction totalled $75,882,446, the highest value since 1950.

I know you will join with us in expressing for the staff of the Department of Public Works and myself the great respect and admiration we have for Mr. Thomas A. Brooks, former Chief Administrative Officer, who retired from City service on June 30, 1958. It was under his jurisdiction that the work enumerated in this report was accomplished.

Very truly yours,

Reuben H. Owens

Reuben H. Owens, Director
Department of Public Works

DEPARTMENT OF PUBLIC WORKS

The following activities were Department-wide in nature or were handled in the General Office:

SAFETY PROGRAM

With the approval of the Chief Administrative Officer, the Director authorized a twenty hour safety course for personnel in the four Maintenance and Operating Bureaus. The course was given in ten two-hour classes which were held four days each week so that only one-fourth of the personnel of any Bureau was in attendance at one time. A total of sixty-four persons in supervisory capacities, ranging from Superintendent to Sub-Foreman, attended the course which was given by the Board of Education.

During the year the Department personnel suffered a total of eighty-eight lost-time injuries as compared with seventy-nine for the previous fiscal year, an increase of 11%. However, the total cost of injuries based upon compensation pay, sick leave pay and medical-hospital costs totaled $43,605 for 1957-1958 as compared to $48,355 for 1956-1957, a reduction in cost of 11%, thus indicating a reduction in severity of the injuries.

The injury record for each Bureau for 1957-1958 as is follows:

	INJURIES			
BUREAU	LOST-TIME	NO LOST-TIME	TOTAL	FREQUENCY RATE*
Architecture	1	2	3	9
Building Inspection	0	1	1	0
Building Repair	30	36	66	39
Engineering	0	13	13	0
Sewer Repair and Sewage Treatment	19	26	45	40
Street Cleaning	30	27	57	43
Street Repair	8	19	27	23
Others	0	0	0	0
Department	88	124	212	29

*Frequency Rate is the number of lost-time injuries per million man-hours worked.

MOBILE RADIO SYSTEM

Since 1954 the Department has had in operation a mobile radio system consisting of two-way radios in twenty-four vehicles, a control station at the Maintenance Yard, a control station at the City Disaster Corps Control Center and a dispatch station at the

City Hall. The equipment for this system was purchased with Federal, State and City funds, obtained by the Disaster Corps.

All units are used in daily operation, particularly so by the four maintenance Bureaus, and have materially increased the efficiency of field operations and control of personnel.

During the year 12,917 calls were logged, an average of 51 calls per working day.

REFUSE COLLECTION RATES

In 1954 the electorate of the City approved an Initiative Ordinance which amended an Ordinance adopted in 1932 relating to refuse collection and disposal. Besides setting up a new schedule of rates for the collection of refuse from residences, flats and apartments, this Initiative Ordinance established a Rate Board which would review and act upon any request for an increase or decrease in this rate structure. It also provided that the Rate Board, upon receipt of such a request, would refer the matter to the Director of the Department of Public Works for a hearing, report and recommendation upon the request.

On August 7, 1957 the Rate Board received a request from the two Scavenger Companies for an increase in the collection rates. This request, with supporting data, was transmitted to the Director who held the required public hearing on the matter and, after a thorough study, made the required report to the Rate Board on October 30, 1957.

In this case the requested rate increase was recommended by the Department, along with the recommendation that the Scavenger Companies have a survey made by an independent research group towards the end result of revising the cumbersome rate schedule and obtaining comparative cost figures of the various types of services rendered.

The Rate Board held a public hearing on the recommended Order on November 29, 1957, and then approved the Order by a Resolution which made January 1, 1958 the effective date of the rate increase.

MISCELLANEOUS

The following activities were accomplished during the past year:

1. This Department has the responsibility of preparing estimates of the cost of Capital Improvement projects for thirty-seven City Departments or Agencies. Cost estimates for the 1958-1959 budget were prepared for two hundred and ninety-six projects

whose total cost amounted to $8,518,638. Of these projects, funds were approved for forty-seven whose total cost was $611,996. These projects are exclusive of the various Bond issue work mentioned in the reports of the Bureaus of Architecture and Engineering.

2. About two hundred and thirty-five State Assembly and Senate Bills proposed by the Legislature, relating to Vehicle Code, Streets and Highways Code, Public Health and Safety Code, Housing Code, and others, were reviewed and reported on to the Chief Administrative Officer as to the suggested City's recommended action.

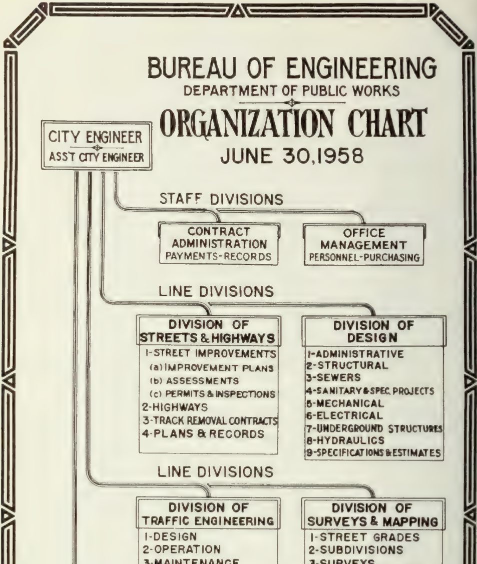
3. The employees of the Department contributed $9,582 to the annual United Bay Area Crusade, an increase of 5% over the previous year.

DEATHS AND RETIREMENTS OF DEPARTMENT PERSONNEL
FISCAL YEAR 1957-1958

The Department lost the valued services of the following personnel by reason of death or retirement:

NAME	CLASSIFICATION	YEARS SERVICE	CAUSE
BUREAU OF ARCHITECTURE:			
Erickson, A. R.	Building Inspector	11	Retirement
BUREAU OF BUILDING INSPECTION:			
Benn, W. W.	Building Inspector	9	Retirement
Hitchcock, H. H.	Civil Engineer	24	"
Smith, W.	Electrical Inspector	33	"
Vandermey, J. C.	Civil Engineer	11	"
Vodden, W. G.	Building Inspector	13	"
BUREAU OF BUILDING REPAIR:			
Almlund, K. J.	Watchman	7	Death
Broderick, H. J.	Gen.Foreman, Sheetmetal	34	"
Brody, E. F.	Elevator Operator	3	"
Geohegan, T.	Cement Finisher	8	"
Cannon, M. L.	Carpenter	32	Retirement
Corvino, J.	Janitor	9	"
Fernandez, R.	Elevator Operator	18	"
Granville, G.	Plumber	22	"
Hess, W. F.	Gen.Foreman, Carpenter	20	"
Judge, H. H.	Jr. Oper. Engineer	34	"
Love, B. S.	Cement Finisher	10	"
Zecher, W. C.	Superintendent	33	"

NAME	CLASSIFICATION	YEARS SERVICE	CAUSE
BUREAU OF ENGINEERING:			
Gallagher, L. J.	Jr. Civil Engineer	8	Death
Gerisch, Cora S.	Clerk-Stenographer	2	"
Fiacsan, J.	Civil Engineer	33	Retirement
Levy, S.	Civil Draftsman	24	"
Slater, J. L.	Civil Engineer	32	"
BUREAU OF SEWER REPAIR & SEWAGE TREATMENT:			
Anderson, D.	Laborer	10	Death
Hylander, K. N.	Chauffeur	22	"
McKenna, E. J.	Operating Engineer	10	"
Bunting, E. R.	Asst. Superintendent	31	Retirement
Juzix, W. P.	" "	31	"
Larson, O. A.	Operating Engineer	18	"
O'Connor, W.	Sewer Cleaner	32	"
BUREAU OF STREET CLEANING:			
Costa, L.	Laborer	6	Death
Peterson, P. A.	District Director	18	"
Sullivan, S. J.	Superintendent	31	"
Bonilla, J.	Laborer	8	Retirement
Breen, T.	"	17	"
Brown, T. F.	District Director	23	"
Forner, L.	Laborer	17	"
Galletta, J.	"	14	"
Leonard, F. J.	Chauffeur	30	"
Massanti, E.	Laborer	19	"
Mondino, B.	"	15	"
Paoli, I.	"	12	"
Sheridan, F. J.	Chauffeur	30	"
Spielbauer, J.	Sub-Fore. Laborer	14	"
Stagnaor, J. L.	Laborer	18	"
BUREAU OF STREET REPAIR:			
Haight, W.	Chauffeur	29	Death
Heanery, H. G.	Watchman	12	"
Menconi, P.	Asphalt Worker	13	"
O'Connor, T. J.	" "	12	"
Cullinan, T. J.	Watchman	24	Retirement
McCarthy, C.	Asphalt Finisher	16	"
McCue, T.	Sub-Fore.Asphalt Finisher	27	"
Rancatore, S.	Laborer	21	"



BUREAU OF ENGINEERING

DEPARTMENT OF PUBLIC WORKS

ORGANIZATION CHART

JUNE 30, 1958

BUREAU OF ENGINEERING

Reuben H. Owens, City Engineer

GENERAL REVIEW OF THE YEAR'S WORK

The wide variety of functions of the Bureau of Engineering is illustrated by the Organization Chart on the opposite page. A major part of the Bureau's work consists of preparing plans and specifications and supervising construction of various improvements under the jurisdiction of the Department of Public Works. The contracts supervised are largely in connection with streets, sewers and traffic signals but a number of important projects were undertaken relating to public buildings and facilities of City Departments other than the Department of Public Works. In addition to contract work the Bureau performs many services such as traffic engineering investigations, maintenance of maps and records for public information, surveys for future improvements, inspection of the condition of streets and sidewalks, and investigations of various projects and proposals.

The total volume of work was slightly less than last year in both value and number of contracts awarded. The number of contracts awarded decreased by 7 to 107. Their aggregate value amounted to approximately $6,236,000 a decrease of about $80,000. Contract payments made during the year totaled nearly 5-1/2 million dollars, an increase of about $400,000 over last year.

HIGHLIGHTS OF THE PAST YEAR

The employment situation eased off somewhat and for the first time in several years Civil Service lists of new eligible personnel were adequate, in most instances, to take care of losses caused by retirements and resignations.

The coming of major league baseball to San Francisco brought with it the need for a new ball park large enough to accommodate over 42,000 spectators and an adjacent area suitable for the parking of approximately 9000 vehicles. As the chosen site, Candlestick Point northeast of Bay View Park, is in an undeveloped area it became necessary to initiate an extensive road and sewer construction program, consisting of some fifteen separate contracts estimated to cost about four million dollars, to provide the requisite service facilities.

SUMMARY OF CONTRACTS

Table I summarizes the contracts which were awarded or under way during the fiscal year under plans and specifications prepared by the Bureau. This summary is supplemented by separate tables in Appendix I which list all of the contracts for each of the various types of construction. Table I also indicates the estimated amount expended during the year on contracts under way, some of which had been awarded during the preceding year but not completed until the current year.

The figures for contracts awarded and amounts expended are shown graphically in Figure I for a ten-year period. The locations of most of the contracts awarded are indicated in Figure 2.

TABLE I
CURRENT CONTRACT DATA SUMMARY
SHOWING ALL CONTRACT WORK AWARDED OR UNDER WAY
July 1, 1957 - June 30, 1958

Table	Type of Construction	Number	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1957-1958
A	Major Thoroughfares	4	$3,650,602.00	$2,181,155.00
B-1	Streets - Private Contracts	25	362,491.00	326,034.00
B-2	Streets - Assessment Proceedings	13	335,183.97	202,720.61
B-3	Streets - Public Contract City Pay	10	324,266.74	466,001.59
B-4	Streets - Car Track Removal	2	186,824.43	256,204.11
C	Traffic Signals and Channelization	6	190,309.66	414,132.78
D-1	Sewers - Pipe, Vitrified Clay and Concrete	5	664,569.03	690,583.70
D-2	Sewers - Concrete Monolithic	2	191,506.90	238,627.80
E	Miscellaneous	40	330,781.15	671,632.10
	TOTALS	107	$6,236,534.88	$5,447,091.69

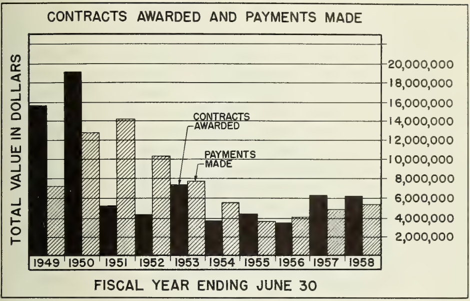


FIG. 1
CONTRACTS AWARDED AND PAYMENTS MADE

PUBLIC BUILDING CONTRACTS

The contract summary in Table I and the detailed listing contained in Appendix I include a number of contracts for improvement of public buildings and other facilities. Brief descriptions of the most representative of these miscellaneous projects, along with their contract costs, follow:

Christmas Tree Point Radio Communications Center

The construction of the municipal radio communications center on the Twin Peaks Christmas Tree Point site was 99 per-cent complete at the end of the fiscal year. This modern dual antenna station will provide the Police Department and the Civilian Defense and Disaster Corps, as well as all other present and future City agencies having need of its services, with the finest in electronic communication facilities.

The communications building was constructed almost entirely underground to facilitate a park-type development of the prominent site with its panoramic view of the City. The project includes public roadways and parking areas, an observation plaza complete with benches on the roof of the communications building, and planting areas for landscaping work planned for a subsequent contract.

The contract cost of the project, which was awarded in March 1957, was $269,266.

CHRISTMAS TREE POINT
Radio Communications Center and Roadways

Laguna Honda Home Incinerator

A modern incinerator to replace the inadequate, unsafe and unsightly incinerator at the Laguna Honda Home was designed, and the contract for the construction thereof was awarded in December 1957.

The new incinerator, capable of consuming 800 pounds of miscellaneous refuse per hour, will meet all requirements of the Los Angeles Smog Control Ordinance in that the air emitted therefrom will be virtually pure, and cleaner than the air normally emitted from powerhouse stacks.

The incinerator will be adequate to include the burnable refuse and cut vegetation from the adjacent Youth Guidance Center and other locations, thereby eliminating burning of such refuse in cans or open fires and saving the labor of attending personnel required to supervise such burning.

The contract cost of the incinerator, which was 25 percent complete at the end of the fiscal year, was $44,849.

Air Raid Warning System

A $10,000 contract for the improvement if the City's air raid warning system was awarded, and the work thereunder was scheduled for completion shortly after the end of the fiscal year.

The installation of 10 new sirens, and the overhauling of 2 existing sirens, under the aforementioned contract will increase the number of sirens in the system to 51.

The constantly altered pattern of noise level and sound distribution throughout the City due to building construction and changing traffic patterns indicates the probability of future changes of and additions to the system from time to time.

County Jail No. 2 Improvements

Four contracts for the improvement of County Jail No. 2, located in San Mateo County, were completed, and another contract, for wiring, piping and miscellaneous appurtenances to the main heating system, was 84 percent complete at the end of the fiscal year.

The completed projects and their contract costs are listed hereunder:

Installation of Stand-by Effluent Pump for Sewage Treatment Plant	$6,893
Repairing and Repainting Exterior Surface of Water Storage Tank	$1,719
Sandblasting Interior Surface of Water Storage Tank	$1,220
Installation of Dampers for Heating and Ventilating System	$2,805

The contract cost of the aforementioned uncompleted heating project was $2,485.

Maintenance Yard Sand Storage and Truck Port

Property recently acquired to expand the Department of Public Works Maintenance Yard was the site upon which sand storage facilities and a reinforced concrete 16-vehicle truck shed were being constructed.

The sand storage facilities and truck shed project, at a contract cost of $72,600, was 99 percent complete at the end of the fiscal year.

Auxiliary Water Supply System

During the fiscal year contracts at the approximate cost of $100,000 were undertaken to relocate and otherwise improve the facilities of the Auxiliary Water Supply System for Fire Protection. Included in the aforementioned cost was approximately $40,000 worth of pipe, fittings and appurtenances which was purchased by the City for the crossing of Golden Gate Park, in the vicinity of Tenth Avenue, with an AWSS pipe line.

Plans and Specifications Prepared for Contracts Awarded by Bureau of Architecture

Plans, specifications and estimates of mechanical and electrical and structural work were undertaken by the Bureau of Engineering for the Bureau of Architecture for inclusion by the latter in certain of its contracts for improvements at San Francisco General Hospital, Laguna Honda Home, Log Cabin Ranch, and various schools, as well as for other miscellaneous projects. The approximate contract costs of the work involved were mechanical $418,000, electrical $178,000, and structural $46,972.

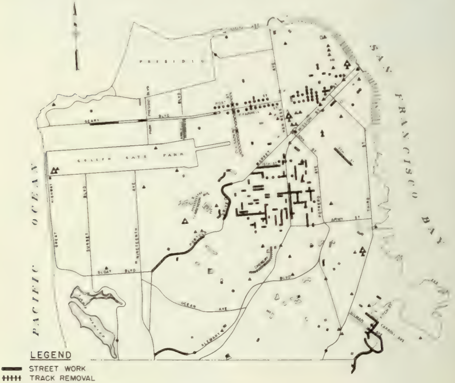


FIG. 2
LOCATIONS OF
CONTRACTS AWARDED

FREEWAY PROGRAM

CITY FREEWAYS

Two freeway projects have been authorized by the City on routes not in the State Highway System. The City's portion of the Southern Freeway, an extension of the State Southern Freeway, is between James Lick Memorial Freeway and a temporary terminus in the vicinity of Twenty-Third Street and Tennessee Street. Crosstown Freeway is through Glen Park Canyon between the State Southern Freeway at Mission Street and a temporary terminus at Seventh Avenue and Lawton Street.

Southern Freeway

On June 27, 1958, the State Director of Public Works awarded a contract for the construction of the James Lick Memorial Freeway-Southern Freeway Interchange in which, under a co-operation agreement with the State, is included the first construction work on the City's section of the Southern Freeway.

Final plans and specifications for the remainder of the City's project are nearing completion by the firm of De Leuw, Cather and Company, Consulting Engineers, with final submission scheduled for early in 1959. They will reflect the changes from the preliminary plans that were necessitated by the demise of the Army Street Southern Crossing.

The Real Estate Department has been proceeding with the acquisition of properties for the City's Southern Freeway Right-of-Way.

Crosstown Freeway

The preliminary report and plans for the Crosstown Freeway were submitted on February 24, 1958 to the Director of Public Works by the firm of De Leuw, Cather and Company, Consulting Engineers.

A public review of the plans is scheduled for July 8, 1958 at the Glen Park Elementary School. At a later date public hearings on the project will be held jointly by the Director of Public Works after which the plans will be forwarded to the Board of Supervisors for formal route adoption.

STATE FREEWAYS

The heavy opposition that has developed toward the planning and construction of freeways, elevated freeways in particular, in residential areas has brought the preliminary planning of State Freeways in San Francisco to an abrupt halt. Preliminary planning of the Western Freeway was initiated and halted by the State Division of Highways, which has not initiated preliminary planning on Central, Golden Gate or Park-Presidio Freeways.

Western Freeway

Wilbur Smith and Associates, Consulting Engineers presented a report on the first phase of their studies for the Western Freeway on December 17, 1957 to the Director of Public Works. This report concluded that a Western Freeway is necessary and will be needed in about ten years.

The second phase of their studies is now under way and will be completed in September, 1958. The report on this phase will compare advantages and disadvantages of several possible route locations and a recommendation.

Central Freeway

Construction of the Central Freeway from Thirteenth Street and Mission Street to Golden Gate Avenue and Franklin Street is being done under a State Division of Highways contract.

The foundations and first deck of the double deck structure were completed from Mission Street to beyond Oak Street and the second deck construction was well under way by the end of the fiscal year.

Embarcadero Freeway

The interchange structure between the Embarcadero Freeway, James Lick Memorial Freeway and the San Francisco-Oakland Bay Bridge was completed and opened to traffic as far as the Main-Beale Ramps at Mission Street.

Construction of the Embarcadero Freeway from Howard Street to Broadway continued throughout the fiscal year.

Southern Freeway

Final plans were completed for the interchange between the James Lick Memorial Freeway and the City's portion of the Southern Freeway and the contract awarded on June 27, 1958.

The design of the Southern Freeway and the relocation of Alemany Boulevard from the interchange westerly to Mission Street has been reviewed and approved by the City Department of Public Works. The section from Mission Street to Balboa Park including the interchange with the City's proposed Crosstown Freeway is being reviewed by the City.

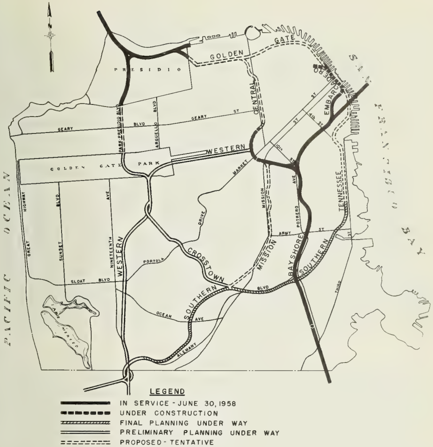


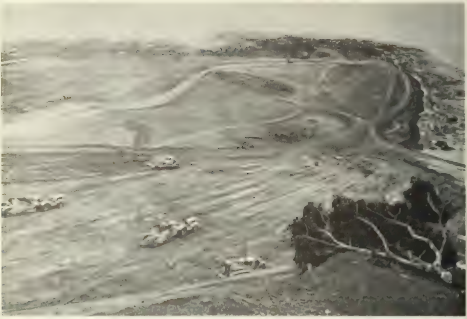
FIG. 3
PLAN OF FREEWAY SYSTEM

STREET AND HIGHWAY IMPROVEMENTS

Sixteen street and highway contracts, aggregating $4,161,693; were awarded during the 1957-1958 fiscal year. These contracts varying in magnitude from $989 for a minor grading job to $1,429,168 for widening and the reconstruction of Geary Blvd. accounted for the improvement of 19.53 miles of city streets and highways. Gasoline taxes and bond proceeds provided the main source of funds for these contracts. The data for the individual contracts is listed in Appendix I, Tables A, B-3 and B-4.

MAJOR THOROUGHFARES

Two of the above contracts amounted to over a million dollars each and a third was over $900,000.



SAN FRANCISCO MUNICIPAL STADIUM SITE
Grading Operation - Note Mud Waves

GRADING OPERATIONS
Looking Toward Stadium Site - Center of Photograph

Jamestown Avenue Extension

On April 18, 1958, under the title "Jamestown Ave. Extension and other Access Roads to Bay View Stadium", the first contract for the development of a system roads capable of handling the tremendous volumes of traffic that will be attracted to the new major league ball park at Candlestick Point was awarded to Chas. L. Harney, Inc. Approximately 1,350,000 cubic yards of earth and rock is to be removed from the easterly slope of Bay View Park and deposited on adjacent tidelands to provide the fill upon which new roads to service the ball park are to be constructed under subsequent contracts.

This is the largest excavation contract ever undertaken within the city limits of San Francisco.

PORTOLA DRIVE WIDENING

The contract for the widening and realignment of Portola Drive from Twin Peaks Boulevard to Sloat Boulevard was awarded on November 6, 1957 to Chas. L. Harney, Inc.

PORTOLA DRIVE WIDENING
One of the Problems of Construction - Broken Water Main

This is the fourth and final unit in the four-stage improvement of the Market Street-Portola Drive route from Douglass Street to Sloat Boulevard. It includes retaining walls, a pedestrian ramp, center islands, left turn havens for major traffic movements and the elimination of hazardous vertical and horizontal alignments where consistent with the minimum damage to abutting properties.

GEARY BOULEVARD WIDENING

On January 17, 1958 a contract for the widening and reconstruction of the roadway on Geary Boulevard from Presidio Ave. to thirty-third Ave. was awarded to Chas. L. Harney, Inc.

The work includes removal of abandoned street car tracks, narrowing the sidewalks, construction of a fourteen foot wide center island with left-turn havens, construction of an entirely new pavement and the installation of modern street lights and traffic signals. Because of the importance of Geary Boulevard as a major traffic and business artery the sequence of construction operations was pre-planned in detail to maintain inconvenience to the public at a practical minimum.

STREET IMPROVEMENTS

The total value of the ten contracts awarded this year for the rehabilitation of deteriorated pavements by resurfacing or reconstruction amounted to $324,267 and accounted for the improvement of 11-1/4 miles of existing city streets.

GEARY BLVD. TRACK REMOVAL AND RECONSTRUCTION
Track Removal Equipment in Operation

TRACK REMOVAL

With the award of the Geary Boulevard contract which is included and described under "Major Thoroughfares", the track removal program was nearing completion.

Two other contracts totaling $186,824 were awarded this year and together with the Geary Boulevard project will account for the removal tracks from 2.6 miles of city streets. Only 4.8 miles of abandoned tracks still remain and plans for the removal of approximately half this amount during the next fiscal year are now being prepared.

The status of the track removal program as of June 30, 1958 is shown in Figure 4.

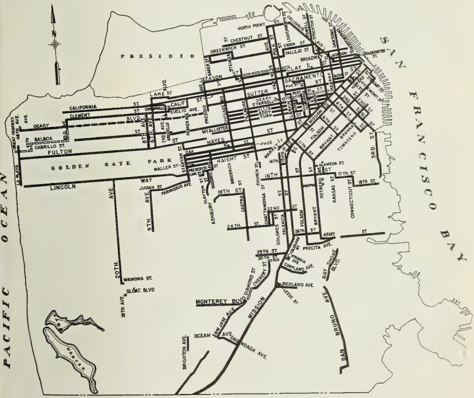


FIG. 4
TRACK REMOVAL PROGRAM
(To June 30, 1958)

GEARY BLVD. TRACK REMOVAL AND RECONSTRUCTION
Cement Finisher in Operation

GEARY BLVD. TRACK REMOVAL AND RECONSTRUCTION
Center Island Construction

PLANS FOR FUTURE WORK

Plans have been completed or are nearing completion for a number of street and highway projects that will be under contract in the coming fiscal year. Comments on the more important of these projects follow.

McLaren Park Roads

Plans are being developed for two units of the McLaren Park Road System. The first is a section of McLaren Parkway, in conformity with the Master Plan, from University Street and Mansell Street to Persia Avenue and Brazil Avenue at La Grande Avenue. This portion will consist of four lanes divided into two roadways with a landscaped center island. The second unit, a replacement for existing Gilligan Drive now within the golf course site, will be a two lane roadway from Visitation Avenue and Hahn Street to McLaren Parkway just west of University Street.

GEARY EXPRESSWAY

The Redevelopment Agency has started the acquisition of properties for the first unit of the Geary Expressway, the underpass at Fillmore Street, and construction is scheduled to start early in 1959.

WEBSTER STREET WIDENING

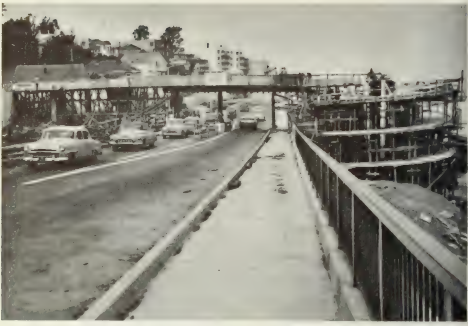
Webster Street is scheduled to be widened in 1959 on the east side from Post Street to Golden Gate Avenue to a four lane divided roadway. Plans are underway and the Real Estate Department has been requested to acquire and clear the necessary right-of-way.

BROTHERHOOD WAY

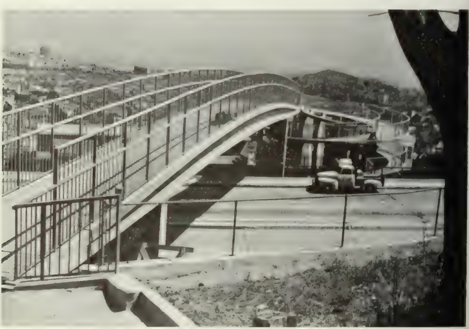
Brotherhood Way, formerly Stanley Drive, will be realigned and rebuilt from Lake Merced Boulevard to west of Junipero Serra Boulevard to eliminate a sharp summit vertical curve and short radius horizontal alignment. Necessary center island channelization will be designed to provide convenient safe access to the four church sites on the south side of the road, and a pedestrian overpass will be built at Thomas More Way.

GENEVA AVENUE WIDENING

Plans are being developed to widen Geneva Avenue from Alemany Boulevard to San Jose Avenue to a four lane divided roadway.



MARKET STREET WIDENING
Pedestrian Overpass and Ramps at 23rd Street During Construction



Pedestrian Overpass and Ramps at 23rd Street Nearing Completion

STREET IMPROVEMENTS FINANCED BY PROPERTY OWNERS

All street construction which was financed in whole or in part by the owners of fronting property and for which permits were granted or public contracts awarded during the 1957-1958 fiscal year together with those authorized but not completed in the previous fiscal year, are listed in detail in Appendix 1, Tables B-1 and B-2.

PRIVATE CONTRACTS

Table B-1 lists the street improvements which were constructed under private contracts negotiated directly between the property owners and contractors of their own choice. The City's only function in private contract work is to grant the permit, furnish the plans and specifications, and inspect the work during construction. Twenty-six permits for private contracts aggregating $363,291 were issued during the year.

ASSESSMENT CONTRACTS

Table B-2 lists similar street projects which were done under public contract awarded by the City, the cost being assessed in whole or in part against the property owners benefited by the work. This procedure is in accordance with the Street Improvement Ordinance of 1934 which provides for preparation of plans and specifications, notification of property owners, public hearings, awarding of contract, supervision of construction, and final levy of assessment on the property. In many cases, City Aid is extended in order to reduce individual assessments to the legal limit which is defined as two and one-half times the lot valuation. The City also contributes funds according to established rules in order to prevent excessive assessments on residential corners, irregular lots and property having disproportionately long frontage. Although only a little more than half as many assessment contracts were awarded than last year, the total value of the contracts was almost doubled.

Table II indicates the volume of work carried on during the year in connection with assessment proceedings for street improvements.

TABLE II
STREET WORK PROCEEDINGS INSTITUTED UNDER THE STREET IMPROVEMENT ORDINANCE OF 1934

Resolutions of Intention passed	15
Street Improvement Projects recommended to the Board of Supervisors	17
Notices of Street Improvements posted	188

Notices of Resolution of Intention mailed	174
Ordinances ordering performance of street improvements passed	16
Proposals for street improvements published	16
Awards of Contract for street improvements	13
Notices of Recordation posted	333
Notices of Recordation mailed	250
Private Contracts granted (estimated cost $363,000)	26
Assessments issued (total amount $230,056.94)	13
Bond payments received (total amount $10,111.24)	121

STREET DEDICATIONS AND CHANGES

The numerous actions taken by the City during the year with reference to subdivisions, street grades, width of sidewalks, and street closings were based on investigations and recommendations of the Bureau of Engineering. In many cases they involved preparation of diagrams, maps, legislation and legal property descriptions by the Division of Surveys and Mapping.

SUBDIVISION MAPS

The following tentative maps were received and reported on:

Midtown Terrace Subdivision No. 7; northwest of Twin Peaks.

Forest Knolls Subdivision No. 1; southerly slope of Mount Sutro.

Resubdivision of a Portion of Block 3028B; southerly slope of Mount Davidson.

Resubdivision of Assessor's Block 6488 and a Portion of Block 6486; southwesterly of Crocker Amazon Tract.

Subdivision maps approved by the Department of Public Works, adopted by the Board of Supervisors as official maps and filed in the office of the Recorder were:

Dalewood Subdivision No. 1; westerly slope of Mount Davidson.

Perego Heights; southeasterly slopes of Twin Peaks.

Sherwood Court Subdivision; southerly slope of Mount Davidson.

Amherst Terrace; northeasterly of McLaren Park.

Midtown Terrace Subdivision No. 6; northwesterly slopes of Twin Peaks.

Forest Knolls Subdivision No. 1; southerly slope of Mount Sutro.

Record of Survey Maps approved by the Department of Public Works, adopted by the Board of Supervisors as official maps and filed in the office of the Recorder were:

Portions of Excelsior Homestead Association, Block 96 and University Extension Homestead Association, Blocks 158 and 159; west of McLaren Park.

Lot 1 Assessor's Block 2798; Midtown Terrace Subdivision No. 4.

Assessor's Blocks 6487, 6488 and a Portion of Block 6486; southwesterly of Crocker Amazon Tract.

STREET OPENINGS, WIDENINGS AND EXTENSIONS

Maps approved, adopted as official maps by the Board of Supervisors and recorded, providing for the opening, widening or extension of streets including streets within new subdivisions were as follows:

Dalewood Way	From Lansdale Avenue to 530 feet easterly	Extension
Myra Way	At Sherwood Court	Widening
Perego Terrace	Burnett Avenue to 360 feet southerly	Opening
Chapman Street	Carver Street to Folsom Street	Opening
Sherwood Court	Myra Way to 210 feet southerly	Opening
Egbert Avenue	300 feet westerly of to 565 feet easterly of Newhall Street	Widening
O'Farrell Street	St. Joseph's Avenue to 245 feet westerly	Widening
homas More Way	Brotherhood Way to 450 feet southerly	Opening
urrows Street	University Street to 540 feet westerly	Extension
mherst Street	Burrows Street to 130 feet northerly	Extension
rinceton Street	160 feet southerly of Felton Street	Widening
arview Court	Marview Way to 710 feet westerly	Opening
lairview Court	Panorama Drive to 490 feet easterly	Opening

Marview Way	Aquavista Way to Farview Court	Extension
Fredela Lane	Farview Court to Marview Way	Opening
Forest Knolls Drive	Oak Park Drive to 300 feet southerly	Opening
Oak Park Drive	Clarendon Avenue to 1880 feet westerly	Opening
Christopher Drive	Warren Drive to Oak Park Drive	Opening
Warren Drive	Oak Park Drive to 1860 feet westerly	Extension
Ashwood Lane	Warren Drive to Clarendon Avenue	Opening
Marietta Drive	Teresita Boulevard to Detroit Street	Widening
Pretor Way	Concord Street to Guttenberg Street	Opening
Blairwood Lane	Oak Park Drive to Warren Drive	Opening

STREETS VACATED

The following streets were vacated between the limits noted:

Islais Creek Channel	Helena Street to Boutwell Street
Jessie Street	A portion southwesterly of Tenth Street
Hudson Avenue	Quint Street to Rankin Street
Quesada Avenue	A portion at Tampa Lane
Donner Avenue	Hawes Street to the Tide Land Survey Line
Egbert Avenue	Hawes Street to the Tide Land Survey Line
Fitzgerald Avenue	Hawes Street to the Tide Land Survey Line
Griffith Street	Carroll Avenue to 100 feet southerly of Fitzgerald Avenue
Unnamed Street	A portion south of Twin Peaks Reservoir
Brussels Street	Burrows Street to Bacon Street
Unnamed Street	A portion in the vicinity of Mount Sutro
Unnamed Street	Foerster Street to Verna Street
Unnamed Street	Verna Street to Los Palmos Drive
St. Anne Street	All that portion south of Pine Street
Larkin Street	Easterly 50 feet between Beach and Jefferson Streets
Innes Avenue	A portion northwesterly of Ingalls Street

STREET GRADES CHANGED

Official grades were modified on the following streets:

Portola Drive	Between Vicente Street and Dorchester Way
Jerrold Avenue	Between Quint Street and 300 feet westerly
Concord Street	Between Brunswick Street and Hanover Street

SIDEWALK WIDTHS CHANGED

Official sidewalk widths were changed on the following streets:

Evans Avenue	Between Army Street and Third Street
Thomas Avenue	Between Silver Avenue and 160 feet northerly
Jennings Street	Between Van Dyke Avenue and Carroll Avenue

SURVEYS AND MAPPING

The Division of Surveys and Mapping employed six field parties during the year.

NUMBER OF SURVEYS

A total of 215 surveys were undertaken as follows:

Public Improvement Surveys		
Public Assessment and Private Contracts	38	
City Pay Contracts.	168	206
Lot and Topographic Surveys		
For City Architect		
Lot	2	
Topographic	2	4
For Recreation-Park Department		
Lot	1	
Topographic	2	3
For San Francisco Redevelopment Agency		
Lot location Surveys, Diamond Heights	2	2
Total Number of Surveys		215

Survey fees, covering Public Assessment and Private Contracts, received during the year amounted to $11,730.00

SURVEY MILEAGE

Surveys run are segregated by type of work as follows: (Project lengths are shown unless noted.)

Site and Lot	Boundary lengths	0.53	miles
	Topography	26.7	acres
Cross-sections for estimate and design of new street and sewer work		6.1	miles
Line and Grade	Sewers	2.7	miles
	Grading, new street work	3.1	miles
	Curbs and pavement, new street work	2.2	miles
Line and Grade and Cross-section	For reconstruction of existing pavement	9.1	miles
	For reconstruction of existing curbs and gutters	0.6	miles
	For reconstruction of existing pavement and tract removal	2.1	miles
Examinations	Sewers	3.50	miles
	New Street Work	3.51	miles
Subsidence		0.5	miles
Slide Areas		3.4	miles
Miscellaneous Type Surveys		9.0	miles
Reference Survey Cuts (Miles of Lot Frontages)		6.9	miles
Reference Survey Monuments		30	each
Repair Survey Monuments		24	each
Total of Surveys	53.3 miles 26.7 Acres 54 each, monument operations		

PRECISE LEVEL SURVEYS

Precise level bench marks established and new elevations determined on existing bench marks, totaled 2,139. To accomplish the latter, 34 miles of precise levels were run.

OFFICE WORK

Maps prepared by the Division of Surveys and Mapping were as follows:

Southeast Senior High School Site	Boundary, Topography
City College of San Francisco	Topography

Southwest Senior High School Site	Boundary, Topography
Golden Gate Park Recreation Field	Irrigation Location
Service Station Site for New Hall of Justice	Boundary, Topography
San Francisco Hospital Wards 30 and 40	Location, Topography
Twin Peaks Elementary School	Topography
Fire House Engine No. 15	Boundary, Topography
McCoppin Square	Topography
Hayes Valley Recreation Center	Boundary, Topography
Chapman Street	Opening
Egbert Avenue	Widening
O'Farrell Street	Widening
Thomas More Way	Opening
Marietta Drive	Widening
Pretor Way	Opening

Four tentative subdivision maps were examined, checked and approved. Six final subdivision maps and three Record of Survey Maps, after being checked for lot line dimensions and exterior boundaries, were approved, adopted by the Board of Supervisors and filed in the Recorder.

More than sixty-nine miscellaneous drawings were prepared in connection with property acquisition and disposition, street openings, widenings and vacations, and easement acquisitions and abandonments.

Thirty-two requests from the City Attorney's Office to determine the City's interest in property involved and to check the boundary descriptions in actions to quiet title were reported on.

Fifteen appeals from decisions of the City Planning Commission were checked to determine whether the signatures represented at least twenty percent of the owners within a radius of 300 feet of the property involved so as to qualify for consideration by the Board of Supervisors.

Eight subpoenas for the City Engineer required court testimony of grades, sidewalk widths and distances, and procedure pertaining to City streets.

One hundred thirty-four descriptions for deeds to and from the City were checked regarding property under the jurisdiction of the Department of Public Works.

Investigations were made for the approval of sixteen street vacations, three sidewalk width changes and three grade changes.

STREET AND SIDEWALK INSPECTION

A staff of six Inspectors of public works construction and one Junior Engineer was employed during the fiscal year 1957-1958 under the direction of an Assistant Engineer on supervision of Street excavations, inspections of sidewalks, and reports and investigations in connection therewith.

Special sidewalk and driveway inspections were made in connection with the various track removal and pavement reconstruction contracts, and with the Department's street resurfacing program in widely scattered sections of the City. Combining sidewalk inspection with pavement improvements results in securing a completely renovated street from property line to property line. Sidewalk inspections covered 28,057 lot frontages.

Efforts were continued to secure new sidewalk construction throughout the City and as a result of this activity 71,604 square feet of new sidewalks were installed during the fiscal year by the responsible property owners.

Defective Sidewalk Repair Ordinance No. 9046 was enforced. This Ordinance provides that the Department of Public Works shall repair defective sidewalks in cases where the owner, upon notification, has failed and neglected to do so. The cost of the repair is an obligation of the owner of the adjacent property and is secured by a lien on the property if the owner does not reimburse the City.

Funds are provided in the Delinquent Sidewalk Repair Revolving fund to cover the cost of repairs and the fund is replenished by the money collected from the property owners.

Various other street maintenance inspections and permit investigations were made by the staff, the majority being utility excavations, tank installations, driveways, use of street space, pavement defects, house-moving, blasting, street flower stands, and miscellaneous complaint and claim investigations. Activities are illustrated by the following summary:

TABLE III

INSPECTIONS, NOTICES, PERMITS AND INVESTIGATIONS

Curb lowering permits and inspections.	1,212
Ownership addresses researched	5,644
Preliminary sidewalk repair notices served	14,925
Formal Notices to construct or repair sidewalks	1,561
Notices to remove obstructions, oil, etc.	2,217
Notices to replace side sewer covers	1,520
Street Space permits and inspections	3,490
Sidewalk tank excavation permits and inspections	147
House moving permits and inspections	71
Defects in pavements reported (written)	2,356
Damaged sign reported	546
Excavation permits approved	13,458
Excavation repaving inspected	2,761
Posting Notices of Improvements	1,221
State Encroachment Permits obtained	51
Asphalt samples for analysis	12
Claims investigations and inspections	549
Special investigations and permits (Blasting, etc.).	3,909
Correspondence answered	489
Personal and telephone calls of complaints or for information	17,254
Building permit driveway plans, checked	1,063
Notices of Street Construction	4,116
Number of Sidewalk frontages inspected	29,057

DAMAGE CLAIMS

The Bureau investigated 171 damage claims which had filed against the Department of Public Works during the fiscal year 1957-1958. The claims arose in general from accidents, usually falls on streets and sidewalks. They were classified as to cause as follows:

59 due to Contractor operations
13 due to Utility operations
25 due to Street conditions
95 due to Sidewalk conditions
16 due to Flood Damage
17 due to Auto Damage
16 unclassified

Under present law, damages due to defective pavements or sidewalks are the responsibility of the Department of Public Works, if negligence in making repairs can be shown. A report on each claim was made for the City Attorney, accompanied by photographs when appropriate.

LANDSLIDE CORRECTION

GENERAL

The annual rainfall in San Francisco, as recorded by the Federal Weather Bureau from July 1, 1957 to June 30, 1958, amounted to 36.48 inches, which amount is approximately 78 percent greater than the yearly average of 20.51 inches and substantially more than twice the 1956-1957 total of 15.04 inches. Approximately 21 inches of rainfall was concentrated in the three month period of February, March and April, resulting in numerous slide movements, most of which were on private property.

All reported slides, whether on private or public property, as well as conditions of slope erosion and roadway subgrade instability, were investigated. As usual, many of the slides on private property were of the type resulting from the removal of lateral support by adjoining property owners and were the responsibility of the owners.

As in the past, the Bureau of Sewer Repair measured the flows from the drains constructed in slide areas and furnished weekly reports. These flows were analyzed to determine the effectiveness of the drainage systems and the need for additional work. In addition, surveys were made periodically at many of the slides to check their stability and determine the rate of movement, if any. The slides at which the City had completed the construction of drainage systems were in relatively stable conditions.

Comments on the slides which received attention during the fiscal year are as follows:

Bache Street Slide

A metal bin-type retaining wall and related drainage facilities were constructed, and the area above the bin wall was paved with asphalt, to remove surface and subsurface waters from the Bache Street Slide. The drainage facilities were connected to the previously existing metal drain north of the Alemany Housing Project. No movement of slide materials had subsequently occurred up to the end of the fiscal year.

Winthrop Street Slide

On February 15, 1958, due to the very heavy early spring rains, approximately 400 cubic yards of rock and earth materials broke loose and slid down the easterly slope of Telegraph Hill near Winthrop and Lombard Streets.

The slide materials filled the width of Winthrop Street and piled up against a warehouse wall on the northeast corner of

Winthrop and Lombard Streets. An emergency was declared and the material was removed by force account to prevent collapse of the warehouse wall in the event additional material should slide and further stress the wall.

Since the slide occurred on private property, the owners thereof will be assessed for the cost of removing the slide materials.

Parker Avenue Slide

Movements in the Parker Avenue slide area have continued but at no more than a nominal rate. At the end of the fiscal year, plans and specifications for reconstruction of part of, and extension of, the existing drainage system approached completion. It is expected that such reconstruction will stabilize the slide area and terminate all movement.

Ingerson Avenue Slide

The two drainage systems constructed in the fall and winter of 1956-57 had seemingly stabilized the Ingerson Avenue Slide south of Bret Harte School. No movement occurred from July 1957 to the beginning of March 1958, when movement resumed. During the month of March 1958, movement varied from 6 inches at some locations to as little as 1/2 inch at other locations. In April 1958 the average movement across the entire slide increased to 9 inches. At the beginning of the following month all movement stopped and no further change had occurred up to the end of the fiscal year.

El Camino del Mar Slides

The easterly El Camino del Mar slide continued to move at a rate of approximately 1/2 inch per month during periods of no rain, which rate increased to approximately 2 feet 8 inches per month during periods of heavy rainfall.

Studies for a proposed bridge to span the easterly slide included extensive test borings, which were completed in November 1957, to determine the depth to sound rock capable of supporting the bridge abutments.

Based on foundation conditions revealed by the test borings, preliminary design studies for a viaduct-type of structure located toward the south slope, a single span tied-arch, and a three-span continuous concrete deck bridge, were all under consideration. The final selection of the type of structure will be based on economic and construction studies which were near completion at the end of the fiscal year.

The westerly El Camino del Mar slide continued to move at a rate varying from 1/2 inch per month to 8 inches per month.

Twin Peaks Boulevard Slide

Movement, which took place both in the Midtown Terrace No. 2 subdivision area and in Twin Peaks Boulevard right-of-way south of Panorama Drive, was due to the placement of uncompacted fill on the slopes and the subsequent heavy rains during the fall and winter of 1956-57.

An emergency contract was let by the City for the portion of the work for which it assumed responsibility, concurrently with the remainder of the work which was done by the subdivision owner. All slide materials were removed and the slope recompacted to maximum density. The City constructed an 8-inch perforated vitrified clay pipe intercepting subdrain along the west curb of Twin Peaks Boulevard, which subdrain also serves as an outlet to the gravel blanket drains constructed by the subdivision owner on his property. The entire drainage system operated effectively during the exceedingly heavy rainfall of the fall and winter of 1957-58, and no subsequent movement had occurred up to the end of the fiscal year.

Junipero Serra Boulevard Slope Stabilization

The slope on the northerly side of the right-turn connection to Junipero Serra Boulevard from Stanley Drive was sloughing and eroding due to rain and weathering, endangering the private property at the top of the slope. Plans and specifications for stabilizing the slope were under preparation at the end of the fiscal year.

Cayuga Avenue Drain

Due to the high water table in Cayuga Avenue between Geneva Avenue and Seneca Avenue, the overlying road pavement and sidewalk subgrades were continuously wet, subjecting the pavement to rapid deterioration. In addition, the adjacent lawn areas were continuously saturated.

A shallow intercepting subdrain was designed and constructed, adjacent to the south curb of Cayuga Avenue for the full length of the block, to sufficiently lower the water table while at the same time not to cause any settlement of nearby houses. The subgrade and lawn areas dried up immediately after completion of the subdrain, and weekly readings have shown the flow in the drain to be continuous and substantial.

Miscellaneous Stabilized Slide Areas

Miscellaneous slide areas cited in the previous Annual Reports, and now believed to be stabilized, include the Farmers Market southwesterly slope, Foerster Street, Union Street at Sansome Street, and Grand View Avenue (formerly Burnham Street).

TRAFFIC ENGINEERING

ADMINISTRATION

During the 1957-58 fiscal year, the first step toward improvement in traffic engineering administration was taken. The Board of Supervisors voted to submit Charter Amendment to the voters which, if approved in the November, 1958 election will place the authority to install traffic control devices in the Department of Public Works. While this measure does not in itself require expansion of the Traffic Engineering Division, it is a prelude to the adoption of Plan "C" which was discussed in last year's report.

The other noteworthy item under this heading is the fact that the Traffic Engineering Division was moved from the City Hall to more adequate quarters at 460 McAllister Street.

PLANNING

The purpose of traffic planning is to study the design of new roads and traffic generators and plan them so as to preclude traffic headaches later on. Below is a partial list of projects, exclusive of parking, for which studies and reports were made or advice concerning traffic aspects of design given:

Various Subdivision layouts
Western Freeway
Bay Bridge Reconstruction Program
Redevelopment Area "E"
High Rise Apartments at Lake Merced Boulevard and at Bay St.
Ferry Park
Civic Center Master Plan
McLaren Park Roads
Hunters Point Expressway
General Freeway System
Baseball Park Location south of Market Street
San Francisco Municipal Stadium

In regard to the last item, considerable study was given toward designing an effective traffic layout for the proposed new

Municipal Baseball Stadium to be located south of Candlestick Point. Since the area was largely undeveloped, it required a new roadway network to connect it to major traffic arteries. The study divided itself into three general parts:

1 Origin and Destination of Traffic
2 Design of road system
3 Operational Plans

1. **Origins and Destinations of Traffic**
For the purposes of design, it was assumed that peak traffic volumes from a capacity crowd exiting from the stadium would, on occasion, coincide with the peak volumes of normal traffic on major trafficways. This was the critical criterion since pre-game stadium-bound traffic will most likely, be less concentrated than post-game traffic. The total amount of stadium traffic was determined by the capacity of the parking lot. To determine where traffic came from and went to, an assumption was made that game attendance would be proportioned directly to the population of given geographical areas and inversely to the distances to be traveled. The 9 Bay Counties were assumed to contribute practically all the patrons. The extreme distance involved was 100 miles. This analysis shows that about 60% of traffic would come from San Francisco. Figure 5 shows the estimated distribution of traffic.

2. **Access Roads and Routes to the Stadium**
Because of the short periods of high peak demand, it was decided early in the study to make the major traffic routes reversible one-way streets with parking prohibited on these streets during pre- and post-game periods. Some streets were restricted to use by either private autos or public transportation. The routing was designed to minimize conflicts and to eliminate cross flows where possible in order to increase traffic capacity. Particular care was taken to avoid need for any significant volume of pedestrian traffic to cross a major vehicular flow. The roadways to be developed were Jamestown Avenue, a south connection to the freeway, Gilman Avenue, Ingerson Avenue, Fitch Street and Carroll Avenue.

3. **Operational Problems**
The operational problems involved are the changing of signal control apparatus and the retiming of signals to fit these unusual peak conditions; determination of the types of "No Parking" and "Towaway" signs that will be needed to denote these parking control measures on

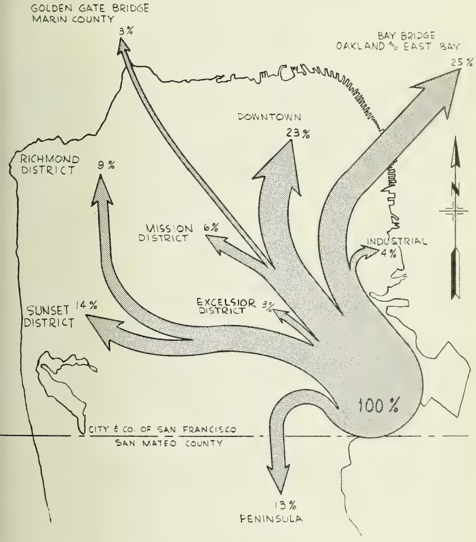


FIG. 5
ESTIMATED DESTINATIONS FROM
STADIUM PARKING LOT

ball game days; the installation and operation of part-time "one-way" signs and control measures to turn back traffic-bound to the ball park when the parking areas become filled.

PARKING

Due to the great increase in apartment building in San Francisco, the amount of "one for one" parking checks conducted by Traffic Engineering increased tremendously. An average of over one apartment building per week was checked formally along with numerous informal checks.

In addition to the "one for one" analysis, reports or studies were made on the following parking projects:

1. Seventh and Harrison Fringe Parking Lot
2. York and Alabama Street Parking Lot - (Connected with Major League Baseball - temporarily at Seals Stadium)
3. Civic Center Parking Garage
4. Marshall Square Parking Lot
5. Redevelopment "E" Parking Garages
6. Super Market Parking Lot at Marina Boulevard and Beach Street and at Funston Avenue and Irving Street
7. Parking Meter Rate Evaluation Study

This last study evaluated the probable effect of increase in parking meter rates to 10¢ per hour or more on parking practices and its possibilities as a source of revenue to finance future off-street parking facilities. In summary, it appeared that, except for the downtown area, an increase in the parking rates would have very little effect on turnover and occupancy, and that, if the expected increase in revenue were used to finance a bond issue, approximately 2300 off-street parking stalls could be provided in the neighborhood districts and land for 1900 stalls could be provided in the downtown district. The measure has aroused considerable interest and at the present time is being considered by the Board of Supervisors.

TRAFFIC SIGNS

Two particular items of interest were recorded in regard to traffic signs in the last year. The first was the installation of "Curb Your Dog" signs by the Traffic Engineering Division whether or not this is a traffic matter is open for question. These signs seem to be quite popular since calls for their installation are being received in ever-increasing numbers. Their effectiveness in the canine community has yet to be determined.

The other item of interest is the fact that after many years, the Division has finally compiled a complete inventory of parking and traffic signs on IBM cards. A tabulation is now available that pinpoints the location of each traffic sign in the City together with its message, type of standard and reflective surfacing, if any. This system will be used in the future for ordering signs as well as keeping a record of their location. This is the first time that this has been done in San Francisco and to our knowledge one of the few times that it has been done anywhere in the country. A complete system of coding had to be developed from scratch, which could be used on a business machine card and which later could be used for ordering signs when the opportunity arises. This system will also enable the Division to keep a better check on sign mortality and the need for relocation of particular signs. At the present time, there is still some difficulty in regard to tabulation errors that must be ironed out, but it appears that the major problems have been solved.

PARKED RUNAWAY ACCIDENTS

In 1955, at the request of the Board of Supervisors, a report was made on parked car runaway accidents. The highest runaway accident locations were analyzed and a program of treatment was suggested for most of the locations. In most cases, the treatment either prescribed raising dangerously low curbs, painting parking stalls, installing angle parking or installing warning signs telling the motorists to curb their wheels, park in gear and set their hand brakes. In 1958, a check back was made on those locations that had been treated. It was found that there had been a reduction in the accident rate of 50%, which seemed to indicate that the measures prescribed had been quite effective. As a result, a new study is being made at other locations to extend the treatment heretofore used.

ONE-WAY STREETS

The application of the one-way regulation to Stockton, Kearny, Third and Fourth Streets practically completes (with the exception of Howard and Folsom Streets) the one-way street plan mapped out in the Master Plan. As was the case with the Post-O'Farrell one-way street combination, the imposition of this regulation on Kearny, Stockton, Third and Fourth Streets engendered strong opposition from various groups in the downtown area prior to the change although not to the same extent as that previously experienced.

Figures 6 and 7 show the results of "BEFORE" and "AFTER" studies on the one-way streets. Automobile speeds, which are an effective indicator of the fluidity of traffic movement showed in all cases an overall improvement and in the case of Stockton and Kearny Street, what could be considered a spectacular improvement. On Stockton Street, automobile speeds showed a 102% increase in the a.m. peak, 61% increase during the day and a 62%

increase in the p.m. peak hour. Similar percentage increases for Kearny Street were 38%, 87% and 37%. Delays to automobiles decreased considerably after the one-way regulations went into effect, dropping approximately 55% on Stockton Street; 33% on Fourth Street; 38% on Third Street, and 58% on Kearny Street.

The beneficial effects on traffic were so obvious together with the absence of any harmful effect on business that the opposition to the one-way regulations practically vanished following a review by the Police Commission after the 90-day trial period was completed.

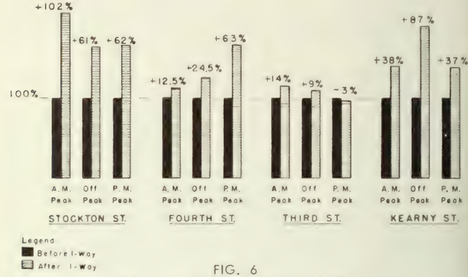


FIG. 6
TRAFFIC SPEEDS BEFORE AND AFTER
ONE WAY STREET INSTALLATION

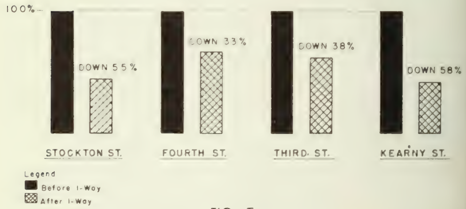


FIG. 7
TRAFFIC DELAYS BEFORE AND AFTER
ONE WAY STREET INSTALLATION

TRAFFIC SIGNALS AND CHANNELIZATION

Three important contracts were let during the year for the installation of traffic signals and channelization. Under the O'Farrell and St. Joseph Street Channelization Contract, channelization was installed near the Kaiser Hospital which would allow the one-way regulation on O'Farrell Street to be extended westward to Masonic Avenue and still provide an emergency entrance for the hospital in the opposite direction. The $73,000 Divisadero Street Contract installed a medial divider, modern traffic lighting and additional traffic signals on Divisadero Street. Isolated Signal Contract No. 15 provided for the installation of new 3-light signals at six intersections, and the replacement of Wiley signals by 3-light signals at four other intersections.

The most noteworthy signal news, however, was the removal of the "scramble" method of traffic signal control from Montgomery Street, which signified the end of two years experience with this type of pedestrian control. The factor prompting removal was the immediate need for more capacity on Montgomery Street to handle diverted south-bound traffic from Kearny Street which was to be made one-way. Since congestion was already heavy on Montgomery Street, it was imperative to find some way of obtaining extra capacity on this roadway to handle this diverted traffic from Kearny Street. In addition to general traffic several heavy bus lines had to be re-routed from Kearny to Montgomery Street. Since a "No Parking" regulation was already in effect, it appeared that the only feasible way to obtain additional needed capacity was to remove "scramble" signal control. The supporters of "scramble" felt that its removal would produce chaos and increase congestion tremendously on Montgomery Street. Because of the opposition, a very complete "Before" and "After" study was made.

In summary, the study showed that in spite of a 33-1/2% increase in traffic volumes on Montgomery Street, there was a 24% increase in traffic speeds and a 50% decrease in traffic delays after "scramble" was removed. Translating the percentages into concrete figures, it showed that traffic speeds increased from an average of 8.7 miles per hour to 10.8 miles per hour and delays dropped 67.3 seconds per vehicle to 31.4 seconds per vehicle.

These studies confirm the previous feeling that "scramble" while very popular with the citizenry was certainly not the most efficient method of moving traffic in downtown San Francisco.

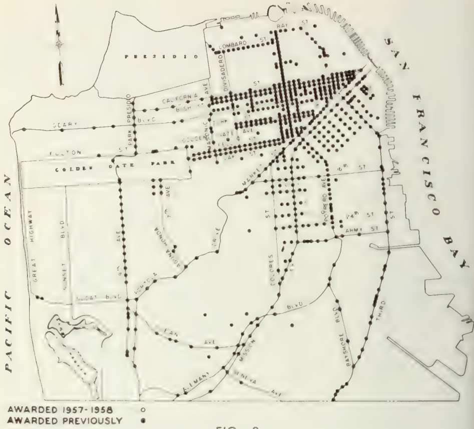


FIG. 8
3-LIGHT TRAFFIC SIGNAL INSTALLATION

TABLE IV
TRAFFIC FACILITIES AND IMPROVEMENTS

	Completed 1957-1958	Approximate Cost 1957-1958	Number In Place 6-30-58
TRAFFIC SIGNS			
Parking Signs Installed	338		
Parking Signs Repaired or Changed	384		
Parking Signs Removed	230		
Other Signs Installed	298		
Other Signs Repaired or Changed	822		
Other Signs Removed	94		
Stop Signs Installed	162		
Stop Signs Repaired or Changed	392		
Stop Signs Removed	40		
Total	2,760	$39,991.24	19,000 est.

TABLE IV - Continued

	Completed 1957-1958	Approximate Cost 1957-1958	Number In Place 6-30-58
STREET NAME SIGNS			
Street Signs Installed	76		
Street Signs Repaired or Changed	869		
Total	945		7,550 est.
PARKING METERS			
New Installations	0	0	12,650
Maintenance Changes *	700		
Relocations	275	3,270.00	
Total Cost		3,270.00	
TRAFFIC PAVEMENT PAINTING			
Standard Striping miles	361.77	42,391.09	
12-inch Stripes, miles	119.22	79,004.61	
Pavement Words (cost incl. in other items)	13,800		
Bus Zones (Units)	1,960	15,306.29	
Parking Stalls (Units - all types)	7,930	6,125.65	
Total Cost		142,827.64	
New School Intersections	20		772

*This Item does not include all of the normal maintenance performed by the Department of Electricity. The 700 changes shown are actual changes ordered by the Police Department and the Traffic Division, and are as follows:

320 Removals; 105 Relocations; and 275 Installations.

SIGNALIZED INTERSECTIONS			
Wiley Type Signals Replaced	1		
3-Light Installations	13		
Net Increase	12		648
Wiley Type Signals Existing			15
Total Signals			663
Equipped with Pedestrian Signals	5		157
Actuated Signals Added	8		155
CHANNELIZED INTERSECTIONS			
Concrete Islands	2		187
Raised Pavement Bars	1		17
Total	3		204
DIVIDED ROADWAYS			
Concrete Center Islands, miles	2.46		48.14 mi.

SEWERAGE SYSTEM

GENERAL

The expansion and modernization of the City's sewerage and drainage system continued to progress, principally under the sewer bond program. Included in the work were planning, design, and the preparation of contract plans and specifications for new storm, sanitary, and collecting sewers, sewer structures and pumping stations, for the replacement of existing obsolete sewerage facilities, and for improvements to the City's three sewage treatment plants.

In addition, inasmuch as the approval of the Bureau is required for proposed sewerage and drainage facilities for new subdivisions, redevelopment areas, freeways, public garages and other improvements, the review of plans and specifications prepared by others for such facilities was, as in the past years, a continuing procedure. Major examples of such work undertaken during the fiscal year was that for the Forest Knolls Subdivisions and for the Southern Freeway.

FUNDS

Expenditures

Sewer contracts awarded during the year, including collecting sewers and sewer work in major street reconstruction contracts, exclusive of assessment projects, were as follows:

Sewer Replacement and Extensions	$ 580,600
Sewers in Contracts for Street Reconstruction and Widenings; Track Removal, and Civic Improvements	288,500
Collecting Sewers and Pumping Stations	324,100
Total	$1,193,200

Bond Issue Balances

The balances remaining in the various Sewer Bond accounts at the close of the fiscal year were as follows:

	Bond Issue Total	Approximate Balance
1944 Sewer Bonds	$12,000,000	$ 808,000
1948 Sewage Treatment Bonds	$15,000,000	$ 516,000
1954 Sewer Bonds	$12,645,000	$8,269,000

SEWER SYSTEM PROJECTS

General

A number of projects to expand the sewerage system, to replace sewers in poor condition, to increase sewer capacity, and to relocate or improve the sewer system in connection with street widenings and other improvements, was undertaken during the fiscal year.

Some of the more notable projects, which included collecting sewer as well as storm and sanitary sewer projects, are described below:

Geary Boulevard Sewers, Contract #2

Larger sewers to replace existing sewers of insufficient capacity in Geary Boulevard, between 16th and 23rd Avenues, were required to be constructed prior to the commencement of the Geary Boulevard widening and pavement reconstruction project.

Under the sewer contract, 640 linear feet of vitrified clay pipe sewer ranging from 12" to 21" in diameter, and 1860 linear feet of reinforced concrete pipe sewer ranging from 24" to 48" in diameter, was constructed. All concrete pipe 42" in diameter or smaller had bell and spigot joints.

The sewer contract cost was $137,700.

Southeast Collecting Sewers, Section K-1

This project includes a diversion structure in Rankin Street at Davidson Avenue, a large combined weir and gate outfall structure in Rankin Street at Islais Creek, 408 linear feet of 5'-0" diameter combined storm and sanitary reinforced concrete sewer, on piles, in Rankin Street from Davidson Avenue to Islais Creek, and 589 linear feet of 18" diameter concrete-encased intercepting sewer, on piles, in Davidson Avenue from Rankin Street to Selby Street.

The 5'-0" diameter combined sewer was constructed with an invert cunnette to carry local sanitary sewage southerly to the diversion structure, while during storms the flow would be northerly toward Islais Creek. The 18" intercepting sewer connects to an existing 5'-6" diameter sewer in Selby Street that carries the flow to the Southeast Sewage Treatment Plant.

The contract cost was $134,960.

Southeast Collecting Sewers, Section H-1, 2, and 3

Included in this contract is a large combined weir and gate diversion structure at the outfall of the Sunnydale Sewer, which outfall discharged into the San Mateo Canal just south of the San Francisco-San Mateo County Line, and 1469 linear feet of 2'-6" x 3'-9" reinforced concrete egg-shaped intercepting sewer, on piles, from the aforementioned diversion structure to the existing Candlestick Point Sewer Tunnel. The present average quantity of flow from the diversion structure through the sewer tunnel to the Yosemite Sewage Pumping Station for delivery to the Southeast Sewage Treatment Plant is approximately 2 million gallons per day.

The contract cost was $189,110.

Southeast Collecting Sewers, Sections G-1, 2, and 3

Construction of Sections G-1, 2, and 3 of the Southeast Collecting Sewers, including the Yosemite Sewage Pumping Station, which commenced in 1956, was completed early in this fiscal year. The pumping station, which has a maximum capacity of 13 million gallons per day, is the major pumping facility for Yosemite Cove, Candlestick Cove, and the future development of the South Basin Tidelands Area.

North Point Collecting Sewers, Section B-2

A portion of Section B-2 of the North Point Collecting Sewers, begun in 1957, was completed during the fiscal year. Construction of the remainder, the Embarcadero Intercepting Sewer, was delayed due to the construction of the Embarcadero Freeway, but was scheduled to be resumed in the next fiscal year.

The sewers constructed under this contract will carry approximately 1.9 million gallons per day to the sewage pumping station to be constructed under Section B-3 of the North Point Collection Sewers. The sewage will be pumped therefrom to the North Point Main, through which it will flow by gravity to the North Point Sewage Treatment Plant.

Larkin Street Sewer

The sewer in Larkin Street between Post and O'Farrell Streets was constructed to permanently replace a temporary repair section installed when a break occurred in December 1955, and to increase the capacity of the inadequate existing brick sewer.

Under this contract, 600 linear feet of 54" and 57" diameter reinforced concrete pipe sewer with bell and spigot joints, was constructed at a contract cost of $96,500, in which cost was included the expense required to remove abandoned cable car yokes unexpectedly encountered in the excavation.

Clarendon Avenue Sewer

Sewers were constructed in Clarendon Avenue, between Stanyan Street and Olympia Way, partially by assessment procedure prior to the widening and improvement of the street in order to provide service for the Forest Knolls Subdivision and the Midtown Terrace #6 and #7 Subdivisions.

A contract was awarded for sewer construction, including 700 linear feet of 30" diameter reinforced concrete pipe sewer, 300 linear feet of 24" diameter vitrified clay pipe sewer on reinforced concrete foundation, and 2400 linear feet of vitrified clay pipe sewers ranging from 21" to 12" in diameter.

The sewer contract cost was $48,000, of which approximately $15,000 was borne by assessments against abutting property owners.

Haight Street Sewer

The existing 16" diameter pipe sewer in Haight Street, between Laguna and Buchanan Streets, was revealed by dye tests to have leaking joints. Further exploration disclosed that large voids had formed along the sewer under the pavement. To correct this condition, the construction of a 12" vitrified clay pipe sewer was included in a contract for the reconstruction of the street pavement in this area.

The contract cost of the sewer work was $7,300.

Guniting of Pacific Avenue Sewer

A 3/4" thick gunite lining was constructed in the existing 3' x 5' brick sewer in Pacific Avenue, between Sansome and Montgomery Streets, a distance of 424 linear feet.

The cost of the contract work, another project in the continuing program of repairing existing brick sewers, was based on a unit bid price of 44 cents per square foot of gunited surface.

Sewers in Street Projects

Sewerage and drainage work was incorporated in several street reconstruction, street widening and track removal projects contracts, the most notable of which, with the cost of such sewage and drainage work, are set forth hereunder:

Portola Drive Widening, Twin Peaks Boulevard to Sloat Boulevard	$128,500
Chenery Street Track Removal, 30th to Diamond Streets	$ 26,600
7th Street Reconstruction, 16th to Townsend Streets	$ 59,000
Geary Boulevard Widening, Presidio to 33rd Avenues	$ 74,700

The sewers in the Portola Drive Widening contract consisted of 1100 linear feet of bell and spigot joint reinforced concrete pipe and 5200 linear feet of vitrified clay pipe main sewer and culverts, of sizes ranging from 8" diameter vitrified clay pipe to 30" diameter reinforced concrete pipe.

PLANNING

General

Planning for, design of, and preparation of contract plans and specifications for further expansion and modernization of the City's sewerage system was in progress at the end of the fiscal year. The most notable of the projects in various stages of planning and preparation were as follows:

North Point Collecting System

Progress continued on the design of the North Point Sewage Collecting System under the program for the cleaning up of San Francisco Bay Waters in conformity with State of California requirements, although some phases of the work were delayed to permit the completion of more urgent projects.

The design of the Jackson-Commercial Streets Sewers under Section B-3 of the aforementioned North Point System, the construction of which was estimated to cost $600,000, was brought to near completion by the end of the fiscal year, but further work thereon was postponed to insure that the project would be compatible with plans for the redevelopment of the area being prepared by the San Francisco Redevelopment Agency. Prior to the end of the fiscal year, an intensive study was made of the existing sewerage system in the redevelopment district, and a report of existing conditions, including recommendations for modernization, was prepared.

Griffith Street Outfall Sewer

The continuation of the development of tideland areas by filling to accommodate anticipated industrial expansion necessitated the planning of an outfall sewer in Griffith Street from Shafter Avenue to the South Basin Canal. Plans and specifications for the sewer were completed and the project, estimated to cost $190,000, was scheduled to go to contract in late 1958.

Division Street Auxiliary Sewer

The lack of capacity of the existing 3-compartment reinforced concrete storm sewer in Division Street resulted in the planning of an additional rectangular compartment. The initial phase of the work, consisting of the construction of the additional compartment between 10th and De Haro Streets, was in preliminary design stage at the end of the fiscal year.

Geary Expressway Sewers

The widening of Geary Boulevard between Van Ness Avenue and Broderick Street, and the construction of an underpass at its crossing of Fillmore Street, will require the rerouting of many existing sewerage and drainage facilities and the construction of additional facilities. The sewerage and drainage facilities, estimated to cost $200,000, were in the preliminary design stage at the end of the fiscal year.

Sewers for Subdivisions and Redevelopment Areas

As mentioned hereinbefore, plans and specifications for sewerage and drainage facilities prepared by others for new subdivisions, redevelopment areas, etc., are subject to the approval of the Bureau of Engineering, and as such, are a source of continuing investigation and review.

SEWAGE TREATMENT PLANTS

General

Several contracts were awarded during the fiscal year, either under the Additions and Betterments program or as repair and maintenance, for improvements at the City's three sewage treatment plants, the most notable of which, along with the contract costs, are set forth hereunder.

Southeast Sewage Treatment Plant

One of the most intriguing problems of the fiscal year was presented by the accumulation of scum materials in the digesters at the Southeast Sewage Treatment Plant which could not be sufficiently reduced by existing equipment to allow preparation of the digesters for an urgently needed renewal of the piping.

Preliminary experimental studies showed conclusively that the scum materials could be removed by the use of a vibrating screen and, based upon these experimental studies, a 48-inch diameter vibrating screen scum separator was designed, and the construction and installation of the separator and a screw conveyor by contract, at a bid price of $7,758, was under way at the end of the fiscal year.

The vibrating screen will separate the solids from the entrained liquid in the scum accumulated in the process of "drawing down" the digestion tanks. The liquid will then be discharged into the existing mixing chambers, while the screened-out solids will be transported by the screw conveyor from which they will be discharged into a dump truck and hauled to a point of disposal.

In addition to aforementioned scum separator and conveyor, the following improvements at the Southeast Sewage Treatment Plant were completed by contract during the fiscal year:

Project	Contract Cost
Installing Heating and Ventilating Equipment	$ 2,299
Galvanizing Existing Handrails	7,887
Storage Yard for Granite Curb	5,291

North Point Sewage Treatment Plant

The following improvements at the North Point Sewage Treatment Plant were completed by contract during the fiscal year:

Installing Standby Sand Pumps	$14,159
Constructing Crane Service Platform and Stairs	2,782
Replacing Ventilation Ducts	14,552

Richmond-Sunset Sewage Treatment Plant

Of the four improvements at the Richmond-Sunset Sewage Treatment Plant listed hereunder, three were completed and one, the additional office room project, was 99% complete, at the end of the fiscal year.

Replacement of Windows $ 5,656

The work consisted of replacing the corroded metal window frames that had become a hazard, with wood sash.

Alterations to Provide Additional Work Facilities $31,269

The work consisted of the remodeling of the administrative offices and laboratory facilities and the addition of new offices to permit a more efficient operation and supervision of the plant.

Alterations to Sand Washer $ 1,702

The work consisted of redesigning and enlarging the receiving box for more efficient sand removal.

Alterations to Grit Pumping Facilities $ 4,650

The work consisted of alterations to piping and electric controls to reduce maintenance and provide a more flexible system for pumping sand and grit.

LANDSCAPING

General

As a result of increased public interest in the beautification of the City, we have intensified our efforts to include landscaping, wherever applicable, as a part of its construction contracts. In keeping with this line of thought, the including of landscaping provisions in the original construction contracts for all major thoroughfares and other major improvements, especially those with potentialities as tourist attractions, will continue to be considered for all such projects planned in the future. In order to insure that maintenance funds will be available, upon completion of the project, we have instituted the procedure of requesting authorization by the Board of Supervisors for landscaping of each project before detailed plans are prepared. This resolution contains an estimate, prepared by the Bureau of Street Cleaning, of the annual cost of maintenance.

As in past years we have had the valuable aid of the Street Tree Advisory Committee in the design of our landscaping, especially with regard to the choice of planting which is suitable for the particular area to be planted, as well as advice on grouping of plants for a pleasing appearance.

Market Street and Portola Drive

Contracts for the widening of Market Street from Hattie Street to Portola Drive, and of Portola Drive from Twin Peaks Boulevard to Sloat Boulevard, the former near to completion and the other well under way at the end of the fiscal year, included certain landscaping work along those thoroughfares.

Plans and specifications for completing the landscaping along Market Street from Hattie Street to Portola Drive and along Portola Drive from Glenview Drive to St. Francis Circle were in progress at the end of the fiscal year, and a contract therefore at an estimate cost of $143,500 was planned to be let so that the landscaping would start upon completion of the aforementioned contract for the widening of Portola Drive.

Jackson Square

Planting of trees in the vicinity of Jackson Square, which includes the Customs Building and Appraiser's building, in areas that do not have subsidewalk basements, was completed during the fiscal year.

A subsequent contract, in areas which have subsidewalk basements, will be let following the construction of tree boxes by the property owners.

Upon completion of the contracts, a total of 84 trees will have been planted at an estimated cost of $3,800.

FUTURE LANDSCAPING

General

Plans and specifications for several landscaping projects had been completed or were nearing completion at the end of the fiscal year, and it is planned that several of these projects will be under contract in the next fiscal year. The more important projects are described hereunder:

Christmas Tree Point

Plans and specifications for the landscaping of the Twin Peaks Christmas Tree Point area in the vicinity of the Radio Communications Center, to provide a park-type development of this prominent site with its panoramic view of the City and the Bay were nearing completion at the close of the fiscal year.

The planting operations are planned to begin in the fall of 1958, with completion schedule for April 1959. The work, estimated at a cost of $30,000, will consist of planting native vegetation of a type and condition endemic to the area.

Geary Boulevard

Plans and specifications for the landscaping of the portion of Geary Boulevard between 33rd Avenue and Masonic Avenue which was under construction at the end of the fiscal year were scheduled to be completed in early 1959 with the call for bids to be issued at such time as to permit planting operations to begin soon after the completion of the construction contract. The preliminary estimate of the cost of landscaping the aforementioned portion of Geary Boulevard is $55,600.

STREET LIGHTING

Up to the beginning of this fiscal year, street lighting facilities were planned, designed and constructed by both the Department of Public Works and the Public Utilities Commission, whereas the operation and maintenance of the facilities was the sole responsibility of the Public Utilities Commission.

The Bureau of Heat, Light and Power of the Public Utilities Commission undertook all work financed by "Ad Valorem" funds, including work made necessary by undergrounding, street lights in new streets and modernizing existing inadequate facilities. The Bureau of Engineering of the Department of Public Works assumed the responsibility for all facilities eligible for financing with Gas Tax Funds, including traffic safety lighting, and relocating existing facilities as necessary to accommodate street widening and street improvement projects.

Although the Bureau of Heat, Light and Power initiated a request for funds for the replacement of inadequate facilities in several streets for inclusion in the 1957-58 budget, the funds were not approved, because the Controller expressed the opinion that all street lighting work should be financed with Gas Tax Funds arranged for by the Department of Public Works. In conformity with this ruling, therefore, the Department of Public Works initiated a supplemental budget request for the miscellaneous street lighting projects not approved in the Public Utilities Commission's 1957-58 budget. Subsequently, on November 4, 1957 the Board of Supervisors approved a $122,000 supplemental appropriation from Gas Tax Funds for these projects and it was agreed between the Bureau of Engineering and the Bureau of Heat, Light and Power that the Bureau of Engineering would be responsible for their design and construction.

These projects were:

1. Market Street Path of Gold	$80,000
2. Marina Blvd. Laguna to Lyon Sts.	25,000
3. Battery and Pine Sts. N. E. Corner	2,100
4. Hyde St. - Chestnut to Bay Streets	3,600
5. Montgomery St. - Filbert and Alta to Montague	4,500
6. Third St. Overcrossing at Bayshore Freeway	2,000
7. Twenty Third St. Overcrossing at Bayshore Freeway	2,500
8. Broadway - Van Ness to Polk St.	2,700
	$122,400

As of June 30, 1958, projects 4, 5, 6, 7 and 8 above have been completed or were under construction. The remaining projects were expected to be started during the next fiscal year.

In addition to the above work, during the fiscal year the installation of safety lighting and street lighting facilities included under several Bureau of Engineering street improvement projects and financed with either Gas Tax Funds or 1947 Street Bond Funds, was also underway.

These projects were:

1. Portola Drive Widening & Realignment
   Twin Peaks Blvd. to Sloat Blvd.

2. Geary Blvd. Track Removal & Pavement Reconstruction Presidio Avenue to 33rd Avenue

3. Market Street Widening and Realignment
Hattie St. to Corbett Avenue

In order to comply fully with the expressed opinion of the Controller, negotiations were under way near the close of the fiscal year between the Department of Public Works and the Public Utilities Commission for the Department of Public Works to assume full responsibility for the future planning, design and construction of all street lighting facilities financed from gas tax funds in conformity with Section 121 of the Charter, Section 145 of the Public Utilities Code and Sections 789 and 790 of the Public Works Code, however, the design of such projects would be subject to review by the Public Utilities Commission. In order to coordinate these activities, the respective staffs of the Bureau of Engineering and Bureau of Heat, Light and Power would confer as necessary during the planning and designing stages.

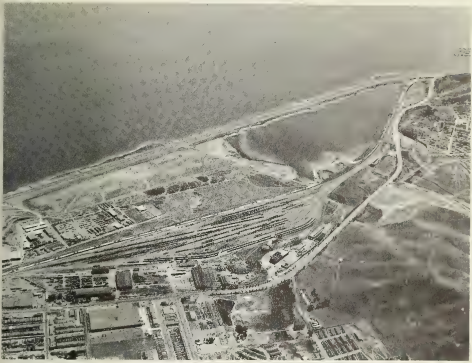
If the proposed plan is adopted, projects not yet completed by the Bureau of Heat, Light and Power, for which funds were appropriated prior to 1957-1958, will be reviewed with the idea of also transferring jurisdiction of these uncompleted projects to the Bureau of Engineering, in which case all files and all other information of the Bureau of Heat, Light and Power relating to these projects would be transmitted to the Bureau of Engineering intact.

If the proposed plan is adopted, it will be understood, of course, that street lighting records and plans of the Bureau of Engineering will be available to the Public Utilities Commission at any time and that the operation and maintenance of all street lighting within the City will remain a function of the Public Utilities Commission.

It is estimated that funds now available to the Bureau of Heat, Light and Power, if transferred, together with the balances remaining in the hereinbefore referred to Supplemental Appropriation Accounts and the funds already approved for the use of the Bureau of Engineering in previous and in the forthcoming 1958-59 Appropriation Ordinance, will finance new street lighting work costing approximately $300,000.

GARBAGE DISPOSAL

Since 1932, all garbage and refuse collected in San Francisco has been disposed of by the sanitary fill method in the tidal flats of San Francisco Bay. Two licensed scavenger companies make the collections which are delivered to the disposal site operated thru the jointly financed Sanitary Fill Company. The City controls collection rates and enforces public health regulations.



GARBAGE DISPOSAL SITE
Line —— • —— Indicates Approximate Shore Line in 1932
COURTESY AERO PORTRAITS – SAUSALITO, CALIFORNIA

COLLECTION AND DISPOSAL

Unsegregated garbage and refuse is picked up in the residential districts once a week. In the downtown districts, where large amounts of paper and garbage accumulate, general collections are made three times a week, and at large hotels, restaurants, etc., collections are made daily. The collectors salvage paper, rags, bottles, and other revenue items enroute and at the sorting shed prior to weighing the garbage designated for the fill. Although the refuse trucks have a capacity of about 20 cubic yards the average load incorporated in the fill is approximately 18 cubic yards.

The scavenger companies collect six days a week or about 312 days a year. The Sanitary Fill Co. operates 5-1/2 days a week from 4:30 A.M. to 3:00 P.M. daily except Saturday when dumping is stopped at 11:00 A.M., as collections are about 60% of the normal week day collections.

SANITARY FILL SITE

The disposal site is located just south of the City's southerly boundary on the Southern Pacific Company's property adjoining the Southern Pacific Railroad Co. Bayshore switching yards for a distance of about 6,400 feet. The earth material used to cover the garbage is conveniently located at the north end of the fill site. About 30 acres of the 250 acres of completed fill area are used by light industry.

FILL AND COVER OPERATIONS

The Sanitary Fill Company operates the fill and cover through their Contractors, Easley and Brassy.

The method of disposal is essentially a daily garbage fill with an earth seal creating separate cells within the fill. Sandy clay, which forms an excellent seal around the garbage is available as well as rock which is necessary for access roads during wet weather operations. The combined compaction of the garbage fill and the underlying Bay mud generally allows for many separate fills, each approximately 20 to 25 feet thick, one on top of the other.

The burning of materials i.e., unsalvable paper, waste, boxes and quarantined garbage, has been eliminated in accordance with the impending ban on open burning by the Air Pollution Control District. Combustible material and steam-cooked quarantined garbage are now incorporated in the fill.

ODORS ALONG THE FREEWAY

In July 1957 the new freeway section just south of the County Line was opened to traffic. In April 1958, the Sanitary Fill Company completed their last lift on dry land, and commenced filling operations in the lagoon to the south which was formed by the freeway fill east of the dump site (See Fig. 9). The introduction of the garbage into the salt water of the lagoon caused rapid decomposition of the garbage, generating hydrogen sulfide gas which has an odor similar to "rotten eggs". In addition, there are two jurisdictions in San Mateo County which discharge raw sewage into the lagoon, thus intensifying the production of odors. The prevailing wind in this area is from the west and within a few weeks the "rotten-egg" odor was noticeable on the Freeway. Complaints began to come in and the condition received considerable unfavorable comment in the press.

As of June 30, 1958, considerable progress has been made toward solving this problem and it is expected that within a relatively short time it will have been completely solved.

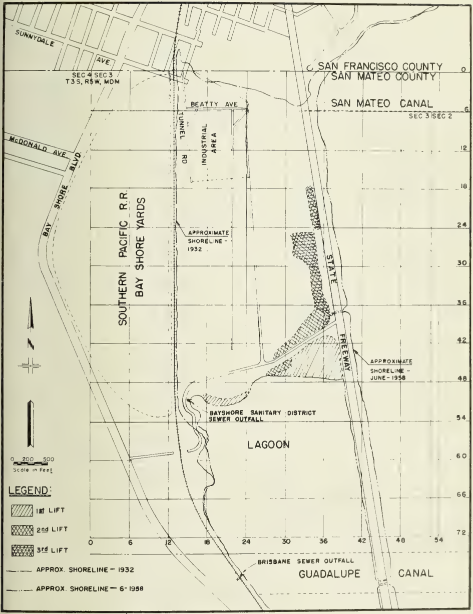


FIG. 9
GARBAGE DISPOSAL SITE

TABLE VI

GARBAGE COLLECTION AND DISPOSAL STATISTICS
Calendar Years 1956 and 1957

GARBAGE COLLECTION	1956	1957
Trucks used, average	164	164
Trips per day	267	267
PAPER COLLECTION		
Flat-bed trucks used	29	31
Amount collected, tons	Not available	Not available
Amount salvaged, tons	Not available	Not available
*Amount dumped, tons	5,580	31,560
INCOME OF SANITARY FILL CO.	$296,578.10	$297,766.05
FILL AND COVER EXPENSE		
Operations	$220,756.96	$235,605.17
Road Maintenance	10,578.67	6,292.38
Administration, Inspection and Legal	56,360.00	52,511.92
Total Expense	$287,695.52	$294,409.47
GARBAGE AND REFUSE HANDLED		
City of San Francisco tons	255,120.55	256,395.65
Other sources, tons	2,773.45	2,531.24
Total Tons	257,890.00	258,926.89
Quantity per day, tons (312 days)	828	852
Cost of disposal per ton	$1.116	$1.105
COVER MATERIAL		
Quantity used, cu. yd.	217,000	225,170
Total Cost	$126,945.00	$129,756.00
Cost per cu. yd.	$0.584	$0.576
Cover per ton of garbage and refuse cu. yd.	$0.842	.87
Total Truck loads of garbage and refuse	83.041	87,819
Average weight per load, tons	3.105	3.24
Estimated average weight of garbage per cu. yd., pounds	344	361

*Increase over past years due to much greater rejection by fiberboard and roofing paper mills.

NOTE: This table is compiled from information obtained from the contractor for the Sanitary Fill Company. It does not reflect administrative or overhead expenses of the Sanitary Fill Company.

LABORATORY AND TESTING

The testing laboratory was operated as a unit of the Division of Construction to check the quality of materials used in construction of projects and to control and test asphalt and concrete mixes used in pavement structures.

In addition many tests, visual analysis and suggestions were made for the Purchaser of Supplies, the Bureau of Architecture, the Public Utilities Commission, the San Francisco Fire Department and the Recreation and Park Department.

CONCRETE

Concrete test cylinders continued to break well above specified strengths, on some street paving projects a high slump concrete was delivered and placed. This resulted in excessive checking and cracking yielding a corduroy surface.

This corduroy texture will undoubtedly work through to the finished asphalt surface.

ASPHALT

The quality and surface texture of asphalt pavements have improved with the use of higher percentages of crushed sands blended with Antioch and other sands in lieu of straight Antioch sand.

The use of 40 - 50 penetration asphalt has been continued as often as possible during favorable weather and 70 - 80 penetration asphalt is used when necessary during cold weather.

The use of smaller sizes of aggregates was recommended for resurfacing streets to facilitate conforming and covering high spots.

Very little ravelling of surfaces has been experienced during this last year.

SUMMARY OF TESTS PERFORMED

A summary of tests performed in the testing laboratory during the year, together with corresponding figures of the preceding year, conducted for the various departments is shown in the following tables.

TABLE V

	1956-57		1957-58	
CHEMICAL AND PHYSICAL TESTS				
Public Utilities Commission	15		10	
Department of Public Works	60		75	
Purchaser of Supplies	140		160	
San Francisco Fire Department	15		25	
Recreation and Park Department	20		5	
Bureau of Architecture	150		120	
Bureau of Engineering	15	415	25	420
PAINT TESTS				
Recreation and Park Department	0		2	
Purchaser of Supplies	12		22	
Bureau of Architecture	20		12	
Public Utilities Commission	5		0	
Bureau of Engineering	2	39	6	42
ASPHALT AND COAL TAR TESTS				
Corporation Trenches	4		4	
Public Utilities Commission	20		12	
Recreation and Park Department	2		0	
Department of Public Works	70		80	
Bureau of Engineering	40	136	60	156
CONCRETE TESTS				
Recreation and Park Department	8		0	
Bureau of Architecture	535		453	
Public Utilities Commission	160		52	
Bureau of Engineering	412	1115	389	894
TOTAL		1705		1512

ADMINISTRATION OF THE BUREAU

ORGANIZATION

The plan of organization of the Bureau as of June 30, 1958, is shown on the chart at the beginning of the report of this Bureau. It will be noted that there are two staff divisions and five line divisions under the direction of the City Engineer who heads the Bureau and reports to the Director of the Department. The Assistant City Engineer assists in general supervision and also acts as Head of the Division of Streets and Highways.

The persons who were in charge of each division, section and unit as of June 30, 1958, are shown in the following tabulation.

SUPERVISORY PERSONNEL
As of June 30, 1958

DIVISION, SECTION AND UNIT	PERSON IN CHARGE
DIVISION OF STREETS AND HIGHWAYS	C.J. Geertz, Asst. City Engr.
Street Improvement Section	E.J. Sierra, Engineer
Highway Section	W.C. Ewing, Engineer
Street Reconstruction Section	A. Goldberg, Engineer
DIVISION OF DESIGN	R.C. Levy, Senior Engineer
Administrative Section	G. Galli, Engineer
Structural Investigation Section	N.F. Yde, Engineer
Structural Design Section	R.G. Lee, Engineer
Sewer Section	R.F. Lauenstein, Engineer
Sanitary and Special Projects	A.O. Friedland, Engineer
Mechanical Section	D. Matlock, Engineer
Electrical Section	A.E. Tanner, Engineer
Hydraulics Section	(Temporarily Vacant)
Utilities	W.R. Daly, Sr. Draftsman
Specifications & Estimates	S.C. Gerughty, Engineer
DIVISION OF TRAFFIC ENGINEERING	R.T. Shoaf, Engineer
SURVEYS AND MAPPING DIVISION	H.G. Louie, Engineer
CONSTRUCTION DIVISION	J.D. Roberts, Sr. Engineer
CONTRACT ADMINISTRATION DIVISION	F. Giusto, Ass't. Engineer

PERSONNEL AT BEGINNING AND END OF FISCAL YEAR

DIVISION	July 1, 1957	June 30, 1958	Change
Design and Administrative	113	126	+13
Construction (Field)	31	32	+1
Surveys and Mapping (Field and Office)	34	36	+2
Traffic Engineering	20	24	-4
General Clerical Staff	21	22	-1
TOTALS	219	240	+21

PAYROLL

The following tabulation shows the number of employees and total payrolls charged to General and Project Funds.

SOURCE OF PAYROLL FUNDS	Employees End of Year	Payroll 1957-58
General Fund (Budget Payroll)	60	$ 425,205
Project Funds - Gas Tax, Bonds, etc. (Interdepartmental Payroll)	180	1,144,068
TOTALS	240	$1,569,273

RETIREMENTS AND DEATHS

The Bureau lost the services of the following valued employees during the year:

J. Fiacsan	Retired	3- 1-58	Engineer	24 years
L. J. Gallagher	Deceased	5-10-58	Jr. Engineer	8 years
S. Levy	Retired	6- 1-58	Draftsman	23 years

BUREAU OF ARCHITECTURE

Charles W. Griffith - City Architect

FUNCTIONS

The Bureau of Architecture is concerned with all new and existing City Buildings with exception of those under the jurisdiction of the Public Utilities Commission and the Recreation and Park Department. The Bureau is charged with the responsibility for the design and construction of new City buildings and the modernization, remodeling, and such maintenance projects of existing City buildings as may require plans and specifications. The activities of the Bureau are divided into two separate but related functions: (1) the preparation of estimates, drawings, and specifications, and (2) the supervision of construction.

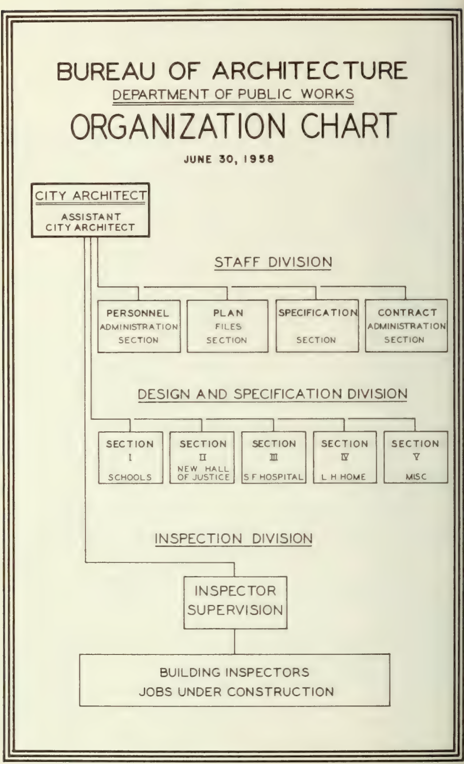
Consulting architectural and engineering firms are usually commissioned to design and prepare the working drawings and specifications for new Civic buildings, under the direction of the Bureau. The Bureau assists the client agency in the preparation of the design program, arranges and participates in the many conferences necessary between the architects and the agency, reviews the drawings and specifications, checks all cost estimates closely, and certifies the proper completion of the architectural work through the various stages. The Bureau also coordinates and programs the work of the consultants to insure the completion of the drawings and specifications to comply with required construction schedules. When the drawings and specifications are properly completed, the Bureau prepares all necessary forms and data so that bids may be requested and received by the Director of Public Works, and upon award of contract, supervises the construction.

Drawings, estimates, and specifications for modernization, remodeling, and repair projects, are normally prepared by architects and draftsmen of the Bureau, since this procedure is more practical and economical. This is also done with some new buildings, such as the Log Cabin Ranch buildings, wherever it is feasible.

The work of this Bureau has been steadily increasing and on July 1, 1958 the entire work load was as follows:

1. Preliminary Planning Stage (126 jobs)	$ 6,752,000.00
2. Preliminary Design Stage (12 jobs)	17,185,000.00
3. Working Drawing Stage (54 jobs)	23,524,472.00
4. Under Construction (77 jobs)	9,797,835.00
5. Contracts Completed, fiscal year 1957-1958 (98 jobs)	13,919,786.37
Total (367 jobs)	$71,179,093.37

This compares with a total work load of 278 jobs and $64,808,140.00 as of July 1, 1957. One significant increase in the


BUREAU OF ARCHITECTURE
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
JUNE 30, 1958
CITY ARCHITECT
ASSISTANT CITY ARCHITECT
STAFF DIVISION
PERSONNEL ADMINISTRATION SECTION
PLAN FILES SECTION
SPECIFICATION SECTION
CONTRACT ADMINISTRATION SECTION
DESIGN AND SPECIFICATION DIVISION
SECTION I SCHOOLS
SECTION II NEW HALL OF JUSTICE
SECTION III S F HOSPITAL
SECTION IV L H HOME
SECTION V MISC
INSPECTION DIVISION
INSPECTOR SUPERVISION
BUILDING INSPECTORS
JOBS UNDER CONSTRUCTION

work load was brought about by the Board of Education's decision to obtain bids on all jobs estimated to cost in excess of $500.00. Formerly bids had been received only on jobs costing in excess of $2,000.00 and these smaller jobs were not supervised by the Bureau. The Board's decision added a considerable work load to both our office and field sections.

ORGANIZATION

The Organization Chart indicates in a very brief manner the breakdown of divisions which have been found efficient in handling the Bureau's work. The City Architect and Assistant City Architect are indicated in one block at the head of the Bureau. There is a further breakdown of responsibilities between the two as follows:

1. The City Architect directs the design of the School program, Hospital, Miscellaneous work, Capital improvement program, the construction inspection forces, and assignment of personnel.

2. The Assistant City Architect directs the Laguna Honda program, Hall of Justice program, and special architectural and engineering surveys.

3. Both the City Architect and the Assistant City Architect maintain sufficient familiarity with the other's work so that no delay in the various programs results when either is away from the office on vacation or for other reasons.

The organization of the Bureau of Architecture is further broken into three separate and distinct functions: Staff Work, Design and Specification Work, and Inspection. These functions are as follows:

STAFF DIVISION

Section I - Personnel

This section is responsible for fiscal arrangements and work orders for both architectural and related engineering services.

Section II - Plan Files

This section is responsible for requisition and procurement of blueprints, assembly of blueprints, specifications, and bid forms, the storage of tracings, blueprints and specifications, and related work.

Section III - Specifications

This section is responsible for specification standards, the coordination and accuracy of the general conditions affecting the contract, and the mechanics of editing, checking, mimeographing and assembly of the specifications.

Section IV - Contract Administration

This section is responsible for the coordination of jobs under construction. All correspondence, shop drawings, reports, etc., concerning jobs under construction and completed work clear through this section.

DESIGN DIVISION

The responsibility for processing the various jobs from the initial inception through to the completion of the final drawings and specifications has been broken down into five separate sections. Each of these sections is headed by an architect who not only maintains formal and informal relationships with the client agency, but also supervises the draftsmen assigned to him for the preparation of drawings and specifications. The five sections are:

Section I - School Work

Section II - New Hall of Justice

Section III - San Francisco Hospital

Section IV - Laguna Honda Work

Section V - Miscellaneous Work

Miscellaneous work includes all work which does not fall under the general categories listed as Sections I, II, III, and IV.

INSPECTION DIVISION

The Bureau supervises and inspects all building construction, whether it has been designed by private architects or by Bureau personnel. The responsibilities of the Inspection Division include progress and validity of the construction work, contract payments, and certification of completion of contract. The number of jobs under construction is 77, and the amount of work is $9,797,835.00.

The Inspection Division is headed by the Senior Supervising Construction Inspector who also supervises the Junior Supervising

Construction Inspector and another Building Inspector who is assigned supervisory duties for the present. The thirty-three building inspectors are broken down into two groups of 10 and one of thirteen, which are supervised by the three mentioned above.

A secondary responsibility of the Inspection Division is concerned with the jobs completed throughout the previous fiscal year. The amount of work which will be done on these completed jobs is indeterminate but, in certain cases, will be considerable. A thorough inspection must be made of each job at the end of the year bonded guarantee period, one year after acceptance of the job, and any defect found, which is the result of faulty materials or workmanship, must be corrected by the Contractor. A situation often develops in which much correspondence and many conferences are involved when such defective work is discovered, and considerable time is always taken in the proper disposition of such cases.

BOND ISSUES

The greatest amount of the Bureau's work load at present is processing work for which bonds have been voted. The bond issue work is as follows:

I 1948 School Bond Issue: $48,890,000.00

This bond issue was voted in November of 1948 and construction started on the first major school project early in 1950. The huge building program continued without interruption throughout the three years of the Korean War, which created many serious material and labor shortages. It is now completed and the final accounting is given below:

1. 26 Elementary Schools:	$21,573,264.00	
2. 4 Junior High Schools:	10,530,225.00	
3. 2 Senior High Schools:	3,979,484.00	
4. 2 City College buildings:	3,332,767.00	
5. 1 Vocational School:	1,697,997.00	
Subtotal		$41,113,737.00
6. Misc. Remodeling work	4,825,000.00	
7. Equipment	2,100,000.00	

8. Administrative Expenses	$ 175,000.00	
9. Sunset Community Center	219,741.00	
10. Land	995,301.00	
11. Balance	317,711.00	
Subtotal		$ 8,632,753.00
Total		$49,746,490.00
Subsidy Federal	$540,000.00	
Property sale	316,490.00	
Subtotal (subtract)		- 856,490.00
Total Bond Funds		$48,890,000.00

II 1952 Fire Department Bond Issue: $4,750,000.00

The construction work of this Bond Issue progressed favorably during the past fiscal year. Three new firehouses were completed, one reconstruction job was completed and one new firehouse and one reconstruction job were in progress on July 1, 1958.

The program is divided into two general parts: (1) the reconstruction of existing firehouses, wherever such reconstruction is practicable and economical, and (2) the construction of new firehouses to replace those houses which must be abandoned because it is not economical nor feasible to complete a reconstruction program which would make them structurally safe. The construction of new firehouses has been delayed considerably however, by factors over which this Bureau has no control. The acquisition of sites for the new firehouses has caused the greatest delay, as it usually requires a period of a year or more to secure the site after a definite location has been determined. No design work on a new firehouse can be done prior to the final acquisition of a site. It is therefore obvious that a period of approximately two years is required between selection of site and actual construction of a new firehouse.

The status of this bond program as of July 1, 1958 is as follows:

A. Construction Completed (83%)
New Fire Houses

Engine No.	Location	Amount
4	676 Howard St.	$ 195,641.33
*10	19th and Folsom Streets	576,869.00
11	Shafter and Ingalls	223,114.36
12	Drumm and Commercial	486,717.72
13	26th near Church	262,294.21
26	Presidio and Euclid	296,482.28
34	Turk and Webster	225,999.43
38	Ocean and Phelan	264,700.00
40	Stanyan and Grattan	248,672.13
41	1325 Leavenworth	169,458.86
45	45th Ave. near Irving	159,129.16
	Subtotal	$3,109,078.48

*128,837.00 from Bond Funds and $448,032.00 from Budget appropriations.

Reconstruction of Existing Fire Houses

Engine No.	Location	Amount
5	1340 Powell	$ 117,410.57
6	356 - 7th St.	122,297.00
20	2239 Greenwich	136,977.39
25	3rd and Arthur Sts.	22,122.36
33	117 Broad St.	4,198.21
36	551 - 26th Ave.	19,931.51
39	1091 Portola Dr.	84,325.01
46	441 - 12th Ave.	70,996.32
47	499 - 41st Ave.	56,072.90
49	2155 - 18th Ave.	28,914.16
	Subtotal	$ 663,245.43

Total Number of Projects: 21

Total construction cost: $3,772,323.91

B. Under Construction (4.5%)

Engine No.	Location	Amount	Type
21	Grove near Baker	$182,511.00	New Fire House
24	100 Hoffman	15,233.00	Reconstruction
Attendant's Quarters 1234 Clayton		7,777.00	
	Subtotal	$205,521.00	

C. Design Stage (12.5%)

Engine No.	Location	Amount	Schedule for Advertising
15	2150 California	$350,000.00	Oct. 22, 1958
14	Oak near Franklin	220,000.00	Mar. 18, 1959
	Subtotal	$570,000.00	

D. Resumé

Total number of projects:	26
Total construction cost:	$4,547,844.91

E. Projects Deferred Indefinitely

Engine No.	Location
3	1067 Post Street
8	1648 Pacific Avenue
16	909 Tennessee Street
17	416 Jessie Street
18	Wilde Avenue & Girard Street
19	4th & Merrimac Street
28	1814 Stockton Street
48	20th & Wisconsin Street

There are 12 projects for which financing has not yet been completed. These are estimated as follows:

7 houses (reconstruction)	$ 350,000.00
4 houses (new)	800,000.00
Property costs (estimated)	100,000.00
Total	$1,250,000.00

III 1954 Laguna Honda Bond Issue: $5,475,000.00

The drawings, specifications, design and construction work of this Bond Issue progressed rapidly during the past fiscal year. As of July 1, 1958, all work was completed, under construction, or scheduled for construction within the next few months. It is apparent that all work will be completed within fiscal year 1958-1959, and the status of the jobs is given below:

Status	No. of Project	Amount	Percentage
1. Completed	10	$3,306,778.52	65%
2. Under construction	7	1,424,659.00	27%
3. Construction scheduled during fiscal year 1958–1959	2	443,673.00	8%
4. Subtotal	19	$5,175,000.00	100%
5. Equipment		300,000.00	
	Total	$5,475,000.00	

In addition to the bond work at Laguna Honda Home, approximately $400,000.00 in deferred maintenance funds are provided each year, and the total construction work to be completed during fiscal year 1958-1959 is in excess of $800,000.00.

This bond issue modernization work has progressed remarkably considering the many difficulties encountered. The first and most formidable obstacle was that the institution had to remain occupied. Fortunately, the appropriation included the modernization of Clarendon Hall, a building which had been abandoned and was not occupied. The first job was the rehabilitation of this building which provided space to move occupants in the subsequent work of the other buildings.

It should also be noted that the work has been expertly programmed and directed by Mr. Devitt who gave his personal attention to this Bond Issue, particularly in the early stages. Mr. Moran, Superintendent of the institution, has been most helpful and cooperative in expediting the work.

One job, in addition to the bond and deferred maintenance work, the rehabilitation of the Old Male Attendants Quarters, has developed. This project is being prepared for capital improvement financing.

IV 1954 San Francisco Hospital Bond Issue: $5,830,000.00

The design and construction work of this Bond Issue and related deferred maintenance work, progressed favorably during the fiscal year, but it is now evident that all jobs requested by the Hospital cannot be financed with funds available. The record of the various jobs is given below. Percentages are based on construction costs and estimated costs of jobs as shown, and the financing is from Bond Funds, Deferred Maintenance Funds, and Capital Improvement Funds.

San Francisco Hospital
Status - July 11, 1958
(Based on re-appropriation of 18 June 1956)

A. Projects Completed July 1, 1956 thru July 1, 1958 (31-1/2%)

	Job No.	Description	Const. Cost
1.	1335	Main Kitchen Dishwashing	$ 17,355.00
2.	1352	Elevators & Stair Enclosure (TB Bldg.)	104,406.00
3.	1366	Exit Stairways	131,316.00
4.	1382	Elevator - Modernization (Wards 10-20-40)	62,372.00
5.	1384	New Incinerator	14,995.00
6.	1385	Garbage Can Washing Facilities	3,972.00
7.	1387	Salvageable Refuse Storage	3,777.00
8.	1406	Bakery & Vegetable Prep. Room	62,007.00
9.	1409	Elevator Modernization (Ward 30)	24,912.55
10.	1439	Ventilating System	2,222.00
11.	1458	Laundry Roofing	4,744.00
12.	1473	X-Ray Developing Room	11,089.00
13.	1489	Roofing - Morgue Bldg.	8,333.00
14.	1475	Weatherproofing	9,849.91
15.	1500	T.B. Modernization	419,221.81
16.	1437	Elevator Maternity Bldg.	61,346.00
17.	1563	Roofing Receiving Bldg.	2,791.00
18.	1381	Admitting Wd. & Social Service	276,894.02
19.	1444	Special Diet Laboratory	31,729.00
20.	1481	Elevator #90-A Modernization Bldg. 90	6,497.00
21.	1480-R	Elevator #90-B Modernization Bldg. 90	4,289.24
22.	1421-R	Exit Stairs Bldg. 80	91,606.17
23.	1425	Maternity Bldg.	820,887.10
24.	1438	Cold Storage Facilities	37,200.00
		Subtotal	$2,213,811.80

B. Projects Under Construction (23-1/2%)

	Job No.	Description	Amount
25.	1570	Locker-Dressing Rooms	$ 309,240.00
26.	1569	Elevator-Wards 20-30	32,426.00
27.	1521	Bldg. 50	469,898.00
28.	1591	Corridors-Wards 30-40	287,420.00
29.	1592	Elevator Wards 30-40	35,531.00
30.	1611	Cobalt Therapy Unit	35,785.00
31.	1590	Ward 40	455,753.00
		Subtotal	$1,626,053.00

C. Projects Scheduled for 1958-1959 Fiscal Year (22-1/2%)

	Job Description	Advert. Date	Amount
32.	Consolidated Laboratories Isolation Bldg. Elevator Reconstruction	Nov. 19, 1958	$ 50,000.00
33.	Project IV Consolidated Laboratories Isolation Bldg.	Jan. 14, 1959	500,000.00
34.	Project III Modernization Ward Bldg. 10	Mar. 25, 1959	700,000.00
35.	Project III Connecting Corridors Wards 10-20	Mar. 25, 1959	290,000.00
36.	Project III Elevator Wards 10-20	Mar. 25, 1959	35,000.00
		Subtotal	$1,575,000.00

D. Projects (not scheduled for 1958-1959 Fiscal Year) (18%)

	Job Description	Advert. Date	Amount
37.	Project III Ward Bldg. No. 30	These projects are to be scheduled to conform with requirements of the Hospital	$ 500,000.00
38.	Project III Ward Bldg. No. 20		500,000.00
39.	Project I Psychiatry Bldg.	May 15, 1959	350,000.00
		Subtotal	$1,350,000.00

E. Projects (unscheduled) (4-1/2%)

	Job Description		Amount
40.	Project II New Electric Generator		$ 50,000.00
41.	Project II Miscellaneous Alterations		265,000.00
		Subtotal	$315,000.00

NOTE: The above projects are listed in the reappropriation of Bond Funds dated June 18, 1956. One important job which has developed since, Converting Ward Bldg. 60 to Isolation Wards, is estimated to cost $600,000. Plans and specifications have been prepared for this project, but no funds are available.

F. Financing of Remaining Projects

1. The projects which are numbered 1 thru 39 above are financed and under construction and are therefore not considered in this section.

2. Bond Money remaining July 15, 1958:

A. Project I	-	$ 22,574.04
B. Project II	-	170,596.00
C. Project III	-	1,404,802.51
D. Project IV	-	195,700.99
E. Contingent Fund	-	280,761.61
F. Equipment	-	319,664.72
G. Miscellaneous	-	77,455.13
	Total	$2,471,555.00

G. Resumé

The Hospital modernization program has progressed favorably but in a step by step manner. The entire institution is occupied, and elaborate procedures must be used in order to insure that the construction work will not interrupt Hospital procedures. The work will continue to progress in a step by step manner as required by the Hospital Superintendent.

It is obvious from the above report that all of the work necessary at the Hospital cannot be financed from the remaining bond funds and the deferred maintenance appropriations. As requested by the Chief Administrative Officer, the Bureau is now preparing a complete estimate of all work required at the Hospital so that proper financing can be arranged.

V 1954 Civic Center Exhibit Hall Bond Fund: $3,275,000.00

The Civic Center Exhibit Hall under the south half of the Civic Center Plaza, officially named Brooks Hall, was completed and occupied by the first convention and exhibit on April 11, 1958. Corrective and work of a minor nature was required after that date, the final completion date being June 27, 1958. The final construction cost was $3,665,736.68. The time required to complete the structure was as follows:

1. Bond Funds voted November 4, 1954
2. Prepare allotment and appropriate funds - 2-1/2 months
3. Prepare program and schematic drawings - 4 months

4. Prepare drawings and specifications - 13 months
5. Bidding and certification of contract - 2-1/2 months
6. Construction 19 months
7. Building occupied April 11, 1958
8. Total time between voting of bonds and occupation of Bldg. 41 months, or three years and five months.

Because the construction of the Civic Center Garage, under the north half of the Plaza, was scheduled for the summer of 1958, the Plaza was not finished. Only a temporary surface was installed over the south half, with asphalt paved walks and lawns surfaces elsewhere. No surfacing was provided on the north half.

It is planned to finish the Civic Center Plaza in conformance with a new design when the construction of the garage is completed. Money for this work will be provided by the Garage Corporation, $154,000.00, the money remaining in Civic Center Exhibit Hall Bond Fund (approximately $170,000.00), and such other funds as may be provided.

The San Francisco Convention and Visitors Bureau and the exhibiting organizations have been pleased with the operation of the Exhibit Hall. However, Phase II of the Development of Convention Facilities, the modernization of the Civic Center Convention Hall, is now considered urgent, and the Bureau has prepared data for this required work.

1956 School Bond Issue $27,000,000.00
Status - July 1, 1958

The design and construction work of this Bond Issue, approved by the election of November 1956, progressed favorably during the past fiscal year. As of July 1, 1958, the various projects were in the following status:

I Under Construction (6%)

	Project No.	Name	Amount
1.	125	Silver Ave. Jr. H.S.	$ 1,035,542.00
2.	105	J. O'Connell H.S.	264,611.00
3.	135	Starr King School	285,200.00
4.	121	H. Mann Jr. H.S.	85,384.00
5.	(None)	Balboa H.S.	26,400.00
		Subtotal	$ 1,697,137.00

II Working Drawing Stage (19%)

	Project No.	Name	Amount
1.	(None)	Polytechnic H.S.	$ 38,000.00
2.	"	G. Washington H.S.	100,000.00
3.	132	Longfellow School	890,000.00
4.	(None)	Lincoln H.S.	300,000.00
5.	120	Francisco Jr. H.S.	645,000.00
6.	101	City College	2,150,000.00
7.	(None)	Polytechnic H.S. (2 jobs)	65,000.00
8.	123	Portola Jr. H.S.	500,000.00
9.	122	J. Denman Jr. H.S.	397,000.00
		Subtotal	$ 5,085,000.00

III Preliminary Design Stage (47%)

	Project No.	Name	Amount
1.	113	S.E. High School	$ 4,400,000.00
2.	114	S.W. High School	4,400,000.00
3.	124	Roosevelt Jr. H.S.	315,000.00
4.	(None)	Remodeling & Reconstruction	3,500,000.00
		Subtotal	$12,615,000.00

IV Preliminary Planning Stage (8-1/2%)

	Project No.	Name	Amount
1.	130	Clarendon School	$ 880,000.00
2.	131	Golden Gate School	1,070,000.00
3.	(None)	Jose Ortega School	400,000.00
		Subtotal	$ 2,350,000.00

V Equipment (5-1/2%)	$ 1,500,000.00
VI Contingencies (9-1/2%)	2,542,863.00
VIII Unallocated (4-1/2%)	1,210,000.00
Total.	$27,000,000.00

VI 1956 Hall of Justice Bond Issue: $19,475,000.00

Construction of the foundations for this structure, in the amount of $889,000.00, began on May 15, 1958, six and one-half months ahead of schedule, and was progressing favorably at the beginning of the fiscal year. The main building contract, estimated to cost $15,000,000.00, is scheduled for advertising on September 24, 1958, and construction work on this second contract will begin upon completion of the foundation work, on or before January 1959. Barring unforeseen and unavoidable delays, the new Hall of Justice will be ready for occupancy on or around January 1961.

This immense project has necessitated much special work by Mr. Devitt, and a great amount of his time has been directed to the coordination of the design work and programming. While the building and related parking facilities occupy only the portion of block bounded by Harrison, Bryant, 7th, and Harriet Streets, south of the Freeway, the planning includes a large parking lot on the north half of the block and a new service station which will be located on the north side of Bryant between 7th and 8th Streets.

A description of the project, which has been divided into Phase I and Phase II, is given below:

Phase I Excavating, Piling, and Pile Cap construction is now under way under a separate contract. The cost was $889,000.00. This work will be completed on or before January 1, 1959.

Phase II General Construction contract including plumbing, mechanical, electrical, air conditioning, ventilation, jail equipment, finish hardware, and all architectural trades will be advertised for bids on September 24, 1958 as follows:

General Construction Contract	$14,200,000.00

Advertise for bids	Sept. 24, 1958
Bids to be received	Nov. 5, 1958
Contract to be awarded	Dec. 1958
Construction to start	Jan. 1959
Construction completed	Jan. 1961

The following separate contracts will also be advertised for bids on September 24, 1958:

Elevators	$ 600,000.00
Landscaping and Finish Grading	35,000.00
Approximate Total Estimated Cost	$15,000,000.00

Description of the Building:

Seven-story and ground floor concrete structure with marble facing, with an adjacent one-story and roof deck parking structure, bounded by Seventh, Harriet, Bryant and Harrison Streets.

Total Gross Square Foot Area is	637,000 Sq. Ft.
Total Cubage	9,650,000 Cu. Ft.

The building will provide space for the following City and County of San Francisco Departments and related facilities:

Roof	Helioport, Microwave Tower
Seventh Floor	County Jail
Sixth Floor	City Jail
Fifth Floor	Police Department
Fourth Floor	Police Department
Third Floor	Superior Criminal Courts, District Attorney, and allied Departments
Second Floor	Municipal Criminal Courts, Adult Probation, and allied Departments
First Floor	Municipal Traffic Courts, Traffic Fines Bureau, Police Traffic Bureau, Coroner's Department in adjacent one-story wing
Ground Floor	Police Department Locker Rooms, Property Storage, Maintenance Areas, Boiler Room, Cafeteria, etc.

Description of the Drawings:

An approximate breakdown of the working drawings is as follows:

Architectural Drawings	95 sheets
Structural Drawings	35 sheets
Electrical Drawings	47 sheets
Mechanical Drawings	69 sheets
Landscape Drawing	1 sheet
	247 sheets

The plans and specifications for this 1956 Bond Issue project were prepared by Weihe, Frick & Kruse, Architects; Hall, Pregnoff & Matheu, Structural Engineers; G. M. Simonson, Electrical and Mechanical Engineer; under the direction of the Department of Public Works, Bureau of Architecture.

OCCUPANCY

The occupancy of the new Hall of Justice is scheduled for January 1961, and will be as follows:

Occupancy of Building	Cost (%)	Area (%)	Sq. Ft. Area
Police Department - City Prison	58.00	63.60	454,000
Criminal Courts (4 Municipal)	9.20	5.20	38,000

Occupancy of Building	Cost (%)	Area (%)	Sq. Ft. Area
Criminal Courts (4 Superior)	6.50	5.30	38,500
Criminal Courts (3 Traffic)	6.70	7.30	54,000
District Attorney	4.10	4.30	30,500
Adult Probation	3.70	3.80	22,000
Public Defender	.85	.90	6,200
County Clerk (Criminal Division)	.45	.50	5,500
Coroner	2.80	2.60	18,500
Sheriff's Detention Jails	7.70	6.50	46,000
Totals	100.00	100.00	713,200

VII 1958 Steinhart Aquarium Bond Issue: $1,575,000.00

This Bond Issue for the Rehabilitation of the Steinhart Aquarium in Golden Gate Park, was approved in the election of June 3, 1958. An appropriation was requested for the funds on June 11, 1958 and was being processed at the beginning of the new fiscal year. Since the program and estimates were carefully established prior to the voting of the Bond Issue, the design and construction work will progress rapidly after the appropriations are made. The work is divided into two phases and the breakdown is as follows:

A. Rehabilitation of Aquarium, Project A

Division		
1. (a) Construction cost (Basis of Architect's contract)	$950,000	
(b) Contingency 12%	114,000	$1,064,000.00
(c) Inspection in Field, testing of materials	12,000	
2. (a) Architect's and Engineer's Contract Fees (Basis of contract 10% of $950,000.00)	95,000	
(b) Contingency but not to exceed 10% of $114,000.00	11,400	$ 118,400.00
3. (a) Bureau of Architecture conferences, surveys, borings, blueprints, checking drawings and specifications, typing and proof-reading specifications, general clerical work during construction, etc.		12,900.00

4. Allotment for Marine Decoration and Miscellaneous Equipment		84,300.00
5. Miscellaneous Costs		9,000.00
Subtotal		$1,288,600.00
B. Salt Water Supply Piping, Project B		
1. (a) Construction cost	$237,000	
(b) Contingency	20,400	
(c) Inspection	6,000	$ 263,400.00
2. (a) Engineering Fees, Surveys, Blueprinting, and all technical services		23,000.00
Subtotal		$ 286,400.00
Grand Total	$1,575,000.00	

VIII Rehabilitation of Civic Center Auditorium
Proposed Bond Issue: $7,225,000.00

An item of $6,000.00 was included in the 1957-58 Budget to prepare an estimate for a Bond Issue for Rehabilitation of the Civic Center Auditorium. Wurster, Bernardi & Emmons; Skidmore, Owings and Merrill; and De Leuw, Cather & Company were engaged as architect-engineer consultants to prepare schematic drawings and estimate.

Before preparing the estimate, it was necessary to establish a proper program for the work. The Convention and Visitors Bureau engaged the Industrial Planning Associates to conduct a survey which was presented in "Convention Facility Needs in San Francisco" dated February 10, 1958. This survey indicated that the most important project to be undertaken in order to retain the present convention business and develop new convention business, was the rehabilitation of the Auditorium. The program for this rehabilitation was established as follows:

1. Sixty meeting rooms seating from 40 to 250, a total of approximately 5,000. The Auditorium now has 16 meeting rooms, seating from 30 to 150. The estimate provides 64 meeting rooms seating a total of about 5,200.

2. The improvement of vertical transportation throughout the building. The Auditorium now has satisfactory stairs but only two obsolete passenger elevators. The consultants made a thorough study of this requirement, and found that the best solution was escalators connecting every floor of the building, first through fourth, one new elevator, and renewing the other elevators.

3. The restoration of the main arena and Polk and Larkin Halls to serve as both large theatre-type meeting rooms and as exhibit space. While at present these rooms do serve in this dual capacity, their finishes are shabby and obsolete. The ceiling of the original arena is worn out and has been removed, and an awning-type ceiling is being installed as a temporary expedient. The acoustics in these three big meeting rooms are poor.

   The estimate provides for all of the above corrective work, plus new seats for Polk and Larkin Halls.

4. General renovation of the building: The mechanical system is obsolete and the electrical system is illegal, overloaded, and dangerous. The estimate includes a modern mechanical system, with proper heating, ventilating, and air conditioning, and a modern electrical and lighting system. It also includes the renovation of all corridors, miscellaneous rooms, toilets and the basement. By far the greatest single expense is the new mechanical system which amounts to about one-third of the entire work.

The estimate, as originally presented by the consultants, was $8,565,400.00. By some minor reductions in the mechanical system and by arranging a coordinated construction schedule with the Auditorium management, it was possible to reduce the estimate to $7,225,000.00, which was approved by the Bond Screening Committee and the Board of Supervisors. This Bond Issue will be considered by the electorate in the election of November 4, 1958.

IX Proposed Bond Issue: New Civil Courts Building and Remodeling of City Hall: $22,150,000.00

During the spring of 1957, the Bureau, working in close cooperation with the architects for the Civic Center Development Plan, the advocates of a new Courts Building, and the Municipal Conference, prepared estimates for this proposed work. The Bond Issue is based on the Report of the Architects and Engineers for the San Francisco Civic Center Development Plan dated May 7, 1957. In their survey of existing conditions at the Civic Center, the consultants found that:

> "Facilities which are now provided in the Civic Center have become over-crowded requiring the use of temporary structures and rental properties. In many cases, offices are scattered and no provision for expansion is available. The present permanent spaces have become largely outmoded. It is essential that additional space be provided and that existing space be rehabilitated to provide efficient up-to-date accommodations that are suitable for the functions to be housed in them."

As a solution to the space problems the Consultants recommended:

1. The construction of a new Civil Courts Building on Marshall Square to house the Municipal and Superior Courts, and all their attendant facilities, at an estimated cost of $16,207,254.00.

2. The remodeling of the City Hall to provide office space for the Mayor, Chief Administrative Officer, Board of Supervisors, and the majority of the City and County Departments, at an estimated cost of $7,918,462.00.

3. The future construction of an Annex Office Building across McAllister Street from the City Hall in the block bounded by McAllister, Van Ness, Polk, and Redwood Streets. This building would be needed in the future but since it was not urgently required at present its construction should be deferred until a later date.

The total amount of the Bond Issue recommended by the Consultants is as follows:

1.	New Civil Courts Building	$16,207,254.00
2.	Remodeling of City Hall	7,918,462.00
	TOTAL	$24,125,716.00

This amount was later modified in conferences with interested citizens and public officials by the reduction of facilities and space as follows:

1.	New Civil Courts Building	$14,379,450.00
2.	Remodeling of City Hall	7,770,550.00
	TOTAL	$22,150,000.00

The Bond Issue was approved by the Mayor's Bond Screening Committee on June 3, 1957, Finance Committee on June 5, 1957, and by the Board of Supervisors on June 10, 1957. The Bond Issue was defeated in the November 1957 election by a narrow margin. It has been approved again by the Bond Screening Committee on July 7, 1958, and by the Finance Committee on July 9, 1958, and will be on the November 4, 1958 ballot.

X Proposed Bond Issue - Public Library: $5,190,155.00

Data was prepared for this Bond Issue, which includes rehabilitation and additions to the Main Library building and nine new branch libraries, in time so that it could be presented on the November 1957 ballot. However, it did not receive the support of the Mayor and downtown organizations, and was therefore not on this ballot. It will probably be revived at a later date after a complete survey of the Library facilities which is now in progress.

PERSONNEL

The total permanent allowance of personnel in the Bureau remained at 61, but because of retirements, etc., several permanent positions were not filled. Requisitions are in for all permanent positions, however, and as soon as lists are established they will be filled. Because of the lack of lists, and the great amount of school vacation jobs this summer, it was necessary to employ 17 temporary employees. The total employees as of June 30, 1958 were 70.

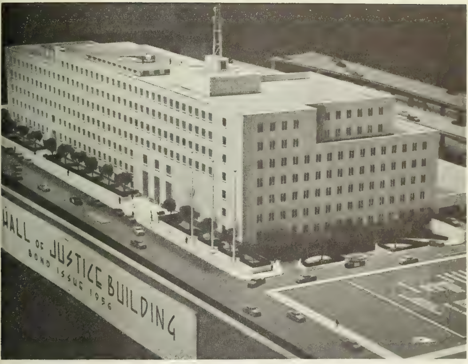
	1 July 1957		30 June 1958		Change	
	Perm.	Temp.	Perm.	Temp.	Perm.	Temp.
City Architect	1	0	1	0	0	0
Asst. City Architect	1	0	1	0	0	0
Architects	9	0	10	0	+1	0
Sr. Arch. Draftsmen	9	0	9	0	0	0
Arch. Draftsmen	5	1	8	1	+3	0
Jr. Draftsman	1	0	1	0	0	0
Office Assistants	2	0	1	0	-1	0
General Clerk	0	0	1	0	+1	0
Sr. Clerk	1	0	1	0	0	0
Gen. Clerk Steno.	3	1	4	1	+1	0
Gen. Clerk Typist	4	0	3	1	-1	+1
Super. Const. Inspector	2	0	0	0	-2	0
Building Inspector	17	7	13	14	-4	+7
Total	55	9	53	17	-2	+8

Total Personnel 70

The Bureau's personnel is divided into four groups according to location. The duties performed by these groups are briefly described below:

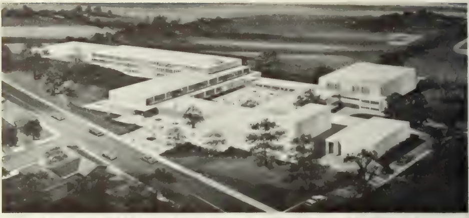
Personnel	Group	Location	Activities
7	1	Room 265, City Hall	Administrative Conferences, Assembly of Plans and Specifications for Bidding, General Files, Drafting for Budget.
9	2	Room 252, City Hall	Inspection Estimates, Preliminary Design, Program and Budget Section, Analysis of Construction.
25	3	45 Hyde Street	General Drafting Room, Specifications, Drawings, Research, Checking and Report Section.
29	4	In the field	Field Inspection.

Total Personnel - 70



HALL OF JUSTICE MODEL - BRYANT & HARRIET STS.
PICTURE OF MODEL

HALL OF JUSTICE - UNDER CONSTRUCTION



S.W. (LOWELL) HIGH SCHOOL - PERSPECTIVE RENDERING

PERSPECTIVE RENDERING OF S.E. HIGH SCHOOL
DESIGN STAGE

BUREAU OF BUILDING INSPECTION

Lester C. Bush, Superintendent

FUNCTIONS

For the purpose of ensuring compliance with City ordinances and the State Housing Act the Bureau of Building Inspection reviews plans and inspects construction and installations involving structural, electrical and mechanical work throughout the City. It also studies and reports on legislation affecting buildings and structures, and proposes new legislation as required. It is also the enforcing agency for the City Planning Code.

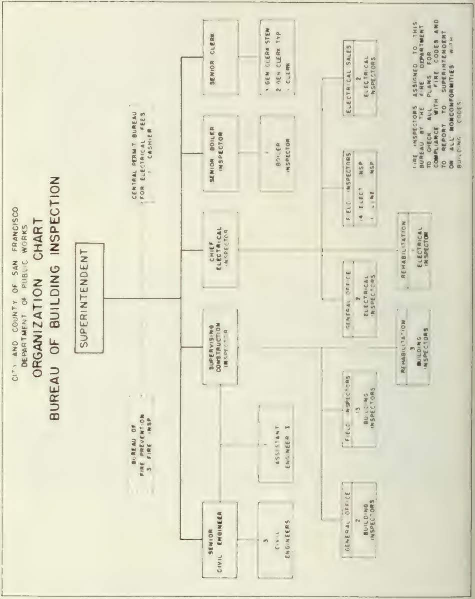
Urban Renewal Program

This program commenced with the title of Slum Clearance Program and was later changed to the Urban Renewal Program. This program has been in effect for slightly over four years with a minimum number of personnel assigned.

The recommendations of a committee of the Mayor call for an accelerated program, as well as a more effective one. In order to accomplish this directive a new Housing Code has been enacted by the Board of Supervisors. Also, our new budget for 1958 was approved for eleven new personnel to be used in an Urban Renewal Division, which will be created in this bureau for the purpose of planned area inspections. The new personnel includes the following: 1 Urban Renewal Analyst, 1 District Supervisor, 1 Clerk-Stenographer, 3 Building Inspectors, 1 Electrical Inspector, 1 Plumbing Inspector, and 3 Sanitarians. Also, 1 Fire Inspector will be transferred to this division.

The initial phase of this program will cover the northern portion of the Western Addition, and it will be determined if this area will be used for conservation, rehabilitation, clearance and redevelopment, or a combination of any of these plans. Last year the Superintendent was appointed Coordinator of Urban Renewal, while the Supervising Construction Inspector was appointed Associate Coordinator of Urban Renewal, with an office in the Mayor's office.

A spot condemnation program was placed in effect in this bureau about four years ago under the authority of the San Francisco Building Code. This work will continue without reduced volume, as required in the recertified workable program. All types of buildings are involved, with the exception of occupied hotels and apartment houses which, however, may be involved where only structural or safety conditions are concerned. This program has been very effective in either restoring unsafe buildings to meet requirements of the codes, or in causing the demolition of them. While this program does not involve the problem that Urban Renewal does, nevertheless it accomplishes a great deal for our city in correcting hazardous conditions in structures and abandoned buildings.


CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF PUBLIC WORKS
ORGANIZATION CHART
BUREAU OF BUILDING INSPECTION
SUPERINTENDENT
BUREAU OF FIRE PREVENTION 3 FIRE INSP
CENTRAL PERMIT BUREAU (FOR ELECTRICAL FEES) 1 CASHIER
SENIOR CIVIL ENGINEER
3 CIVIL ENGINEERS
1 ASSISTANT ENGINEER I
SUPERVISING CONSTRUCTION INSPECTOR
CHIEF ELECTRICAL INSPECTOR
SENIOR BOILER INSPECTOR
1 BOILER INSPECTOR
SENIOR CLERK
1 GEN CLERK STEN
2 GEN CLERK TYP
1 CLERK
GENERAL OFFICE 2 BUILDING INSPECTORS
FIELD INSPECTORS 13 BUILDING INSPECTORS
REHABILITATION 3 BUILDING INSPECTORS
GENERAL OFFICE 2 ELECTRICAL INSPECTORS
REHABILITATION 1 ELECTRICAL INSPECTOR
FIELD INSPECTORS 14 ELECT INSP 1 LINE INSP
ELECTRICAL SALES 2 ELECTRICAL INSPECTORS

FIRE INSPECTORS ASSIGNED TO THIS BUREAU BY THE FIRE DEPARTMENT TO CHECK ALL PLANS FOR COMPLIANCE WITH FIRE CODES AND TO REPORT TO SUPERINTENDENT ON ALL NONCONFORMITIES WITH BUILDING CODES

Buildings and Structures

The bureau consults with architects, engineers, contractors, and home owners in the preliminary stages of the preparation of their plans whether for new buildings or for alterations to existing buildings. It studies and reports on legislation affecting building matters and proposes new legislation as required.

The bureau examines and reports on all applications for permits submitted to the Department of Public Works for new buildings, alterations to existing buildings, billboards and signs (electric and non-electric); inspects all this work as it progresses; makes a final inspection of new buildings or where a change of occupancy classification occurs, and issues Certificates of Final Completion when the work is finished.

Four "called inspections" on buildings under construction are made at the following times:

a. Foundations or other concrete forms must be inspected and approved before concrete is poured;

b. Inspection before interior lathing. This is to see that all bracing, framing and firestops are installed;

c. Inspection before exterior or structural plaster is in place;

d. Final inspection prior to occupancy.

Electrical Work

The bureau regulates and supervises the installation of interior electrical wiring of commercial, industrial and residential buildings and insures by frequent and adequate inspection that the standards provided for in City ordinances, State and National codes are maintained. Closely tied in with the inspection of interior wiring of buildings are other activities of the bureau made necessary by the provisions of electrical ordinances affecting other City departments, and which entail cooperation with the Fire Prevention Bureau, Police Department, Health Department and with the Division of Industrial Safety of the State of California. Some of these activities are summarized in the following paragraphs.

Reports of fire presumably caused by defective electrical installations and all places reported to be of potential electrical hazard are also checked by the electrical inspectors.

Coin operated amusement devises with electrical controls are licensed by the Police Department, and before issuance of permit are required to meet the approval of the electrical division of this bureau.

Night clubs and places of public assembly are licensed through the Health Department, and before a permit to operate is granted the electrical requirements of this bureau in regard to adequate lighting, emergency and exit lights must be complied with, and approval forwarded to the Health Department.

A copy of all complaints and violations of the Electrical Safety Orders of the State of California issued to property owners is filed with this bureau, is checked and verified by the electrical inspectors, and held in the files until final approval is given.

State of California laws require that the electrical installation of wiring circuits, fixtures, signs, motors and electrical appliances be made by contractors licensed by the State, and San Francisco ordinances require that such licensed contractors be registered with this bureau. Industrial plants which have their own plant electricians must also register with this bureau.

All spray painting establishments in the City of San Francisco are licensed through the Fire Prevention Bureau, and before licenses are issued the electrical work connected therewith must be approved by this bureau.

Boilers and Air Tanks

Steam boilers and air pressure tanks are inspected to ensure compliance with all existing laws.

ORGANIZATION

Duties of the various members of the staff are described in the following paragraphs.

Superintendent. In addition to supervising the office he takes an active part in the deliberations of various departments of the city government, as well as other organizations, with reference to matters of building construction, the building code, and building safety, and is also Coordinator of Urban Renewal.

Supervising Construction Inspector. Acts as assistant to the Superintendent in the field; assigns and supervises the work of building inspectors; prepares records and reports, and checks construction progress. He also supervises the Condemnation Program.

Building Inspectors. One building inspector assists the Supervising Construction Inspector. He assists the public at the counter and provides them with the information they seek concerning various building regulations. Handles all applications for permits at last step before permits are issued.

One building inspector represents the Director, Department of Public Works, on all cases coming before the Board of Permit

Appeals with the exception of new construction. He inspects and reports on all night clubs and dance halls, when requested by the Police Department.

Thirteen building inspectors are assigned to specific districts into which the city is divided and are charged with the responsibility of inspection work in their respective districts. This includes new construction of all types, alterations, billboards and signs. They report on all applications for construction in their districts prior to examination by the divisions of the bureau; prepare and post Certificates of Final Completion; check and follow up complaints; interview property owners; and appear before courts in matters of condemnation and prosecution.

Three building inspectors are assigned to spot condemnation work.

Boiler Inspectors. Make all installation inspections where any pressure vessel is installed. Inspect all boilers and air pressure vessels regularly when they are not insured, and inspect and recommend repairs to defective equipment. As deputy inspectors they must check all requests made by the Division of Industrial Safety and report any action taken by the city. They investigate all accidents where pressure vessels are involved and report the probable cause to the State and to the National Board of Boiler and Pressure Vessel Inspectors. One inspector is a member of the A. S. M. E. Boiler Code Committee, and passes on all new A. S. M. E. Code changes, and submits his report each month to the New York office of the A. S. M. E. Complaints about pressure vessels are investigated and the necessary action taken to eliminate any defects or violations, if found.

Senior Engineer (Civil). Acts as Chief Structural Engineer; reviews engineering data submitted for approval of new materials and assemblies, and makes recommendations to the Superintendent regarding such approvals; and supervises the work of the other engineers in the bureau.

Structural Engineers (Civil). Check and report on all plans pertaining to structural engineering; make field inspections; follow up matters concerning structural safety brought to their attention by the Supervising Construction Inspector or the district building inspectors; and assist other departments or bureaus in structural matters.

One Engineer, Civil, examines all plans and details for new construction and estimates the cost thereof. He also represents the Director, Department of Public Works, on all cases coming before the Board of Permit Appeals which concern new construction.

Senior Clerk. In charge of all clerks in the bureau and all administrative work.

Chief Electrical Inspector. Under general direction assigns, supervises and reviews the work of electrical inspectors; approves or disapproves plans and specifications for electrical installations; supervises the maintenance of inspection records; and makes required reports.

Two electrical inspectors are detailed to the enforcement of the Electrical Sales Ordinance. This ordinance governs the sale, display, or giving away as a premium, all electrical material, devices and appliances designed for attachment to, or installation in or on any electrical circuit or system for light, heat or power. This entails visiting all retail stores, premium stores, factory agents, jobbers, manufacturers, and wholesalers to inspect all materials, devices, and appliances, and to determine whether they are approved by this department before they can be sold, displayed, or installed in San Francisco. In many cases this means granting a provisional approval on articles that have been submitted to Underwriters' Laboratories, Inc. for testing but testing not having been completed allows a manufacturer to install or sell these appliances or materials with a proviso that any corrections required be made in the field. There are 2287 retail stores registered under this ordinance at present, which are visited regularly for the purpose of inspecting the merchandise. As more merchants are going into business all the time and many ownerships are being changed, it is necessary to visit these stores to check their registration and inspect their merchandise.

The Line Inspector. Inspects all installations, alterations, and maintenance of overhead lines owned and operated by public and private utilities used for the purpose of distributing electric power, light, communication and signal transmission, to see that they conform to the Rules for Overhead Line Construction (G.O. 95), Public Utilities Commission, State of California, and the San Francisco Electrical Code. The line inspector also checks plans and specifications and inspects all overhead lines pertaining to trolley coach installations. He inspects temporary electrical street decorations when supported by trolley span wires, or messengers, and inspects installations of radio and television antennas. He checks all underground districts to see that they are kept clear of all overhead wires and cables, and checks the erection of scaffolds that may be in proximity to high voltage lines.

Two electrical inspectors are assigned to office work. They handle all complaints and requests for information from the public.

One electrical inspector is assigned to the Urban Renewal Program.

Fourteen electrical inspectors are assigned to districts in the city and each handles all of the electrical work in his assigned district except those items under the Electrical Sales Ordinance.

BUILDING CONSTRUCTION

Fiscal Year	Permits	Cost of Construction
1954-1955	8961	$61,812,718
1955-1956	9445	71,692,205
1956-1957	11527	66,725,530
1957-1958	11207	75,882,446

WORK DONE

The extent of routine operations of this Bureau for the fiscal years 1956-1957 and 1957-1958 is set forth in the following tabulation taken from the records of the Central Permit Bureau.

Type of Construction	Number of Permits 1956-1957	Estimated Cost	Number of Permits 1957-1958	Estimated Cost
1A	12	$12,094,579	18	$15,058,531
1B	19	10,387,793	11	9,093,439
2	-	-	-	-
3	40	3,553,195	32	3,567,694
4	27	706,370	28	670,240
5	818	15,912,586	993	22,226,911
Alterations	10,611	24,071,007	10,125	25,265,631
TOTALS	11,527	$66,725,530	11,207	$75,882,446

Type 1A - Steel frame with reinforced concrete walls and floors. Fire-resistive construction

Type 1B - Built entirely of reinforced concrete. Fire-resistive construction.

Type 2 - Similar to Type 1, but with limitations.

Type 3 - Wood frame floors with exterior walls of masonry. Ordinary masonry construction.

Type 4 - Light incombustible frame construction.

Type 5 - Wood frame construction.

BUREAU STATISTICS

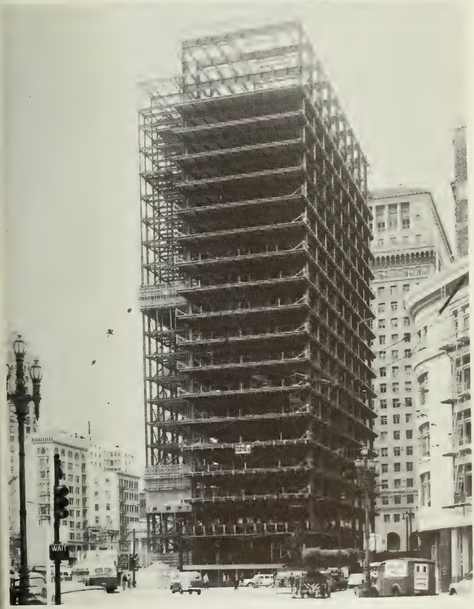
FOR FISCAL YEAR

BUILDING INSPECTION DIVISION:

Inspections reported by inspectors of buildings	55,598
Projects remaining on which permits have been issued that have not been reported completed by inspectors of buildings	4,375
Complaints that have been reported adjusted by inspectors of buildings	4,253
Inspections reported by inspectors of boilers	1,721
Complaints and requests for information recorded	382
Applications for permits examined by and approved by structural engineers	3,375
Applications for permits examined and approved by plan checker	1,126
Miles traveled during the year by 30 passenger cars on inspection service	214,939

ELECTRICAL INSPECTION DIVISION:

Permits issued, wiring, fixtures, signs	16,065
Inspections made	55,669
Complaints investigated (found defective)	5,406
Installations uncovered that were not with the department ("sneaked-in" jobs)	2,494
Installations in progress as of June 30, 1958	5,058
Installations completed	15,725
Pin ball machine inspections	670
Juke box inspections	96
Electrical Sales inspections	4,287
Overhead line inspections	5,010



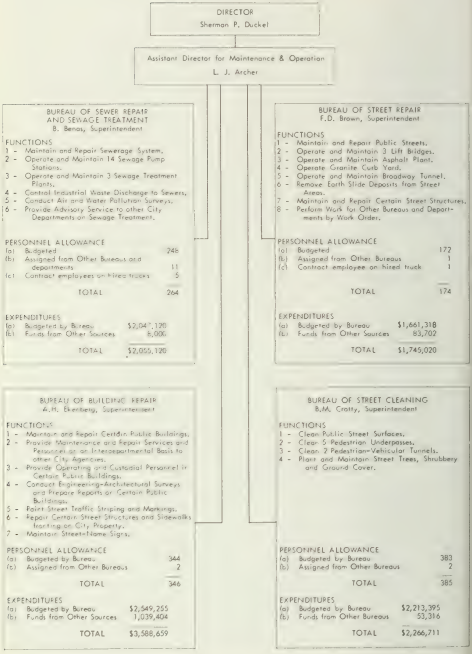
CROWN ZELLERBACH OFFICE BUILDING
Market & Battery Street

CALIFORNIA MASONIC MEMORIAL TEMPLE
S.W. Corner California & Taylor Streets

PUBLIC PARKING GARAGE
5th & Mission Streets

JACK TARR HOTEL AND OFFICE BUILDING
Block Bounded by Geary, Post, Van Ness and Franklin Streets

ORGANIZATIONAL RELATIONSHIPS
MAINTENANCE, REPAIR & OPERATION
1957-1958



DIRECTOR
Sherman P. Duckel

Assistant Director for Maintenance & Operation
L. J. Archer

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT
B. Benas, Superintendent

FUNCTIONS
1 - Maintain and Repair Sewerage System.
2 - Operate and Maintain 14 Sewage Pump Stations.
3 - Operate and Maintain 3 Sewage Treatment Plants.
4 - Control Industrial Waste Discharge to Sewers.
5 - Conduct Air and Water Pollution Surveys.
6 - Provide Advisory Service to other City Departments on Sewage Treatment.

PERSONNEL ALLOWANCE	
(a) Budgeted	248
(b) Assigned from Other Bureaus and departments	11
(c) Contract employees on hired trucks	5
TOTAL	264

EXPENDITURES	
(a) Budgeted by Bureau	$2,047,120
(b) Funds from Other Sources	8,000
TOTAL	$2,055,120

BUREAU OF STREET REPAIR
F.D. Brown, Superintendent

FUNCTIONS
1 - Maintain and Repair Public Streets.
2 - Operate and Maintain 3 Lift Bridges.
3 - Operate and Maintain Asphalt Plant.
4 - Operate Granite Curb Yard.
5 - Operate and Maintain Broadway Tunnel.
6 - Remove Earth Slide Deposits from Street Areas.
7 - Maintain and Repair Certain Street Structures.
8 - Perform Work for Other Bureaus and Departments by Work Order.

PERSONNEL ALLOWANCE	
(a) Budgeted	172
(b) Assigned from Other Bureaus	1
(c) Contract employee on hired truck	1
TOTAL	174

EXPENDITURES	
(a) Budgeted by Bureau	$1,661,318
(b) Funds from Other Sources	83,702
TOTAL	$1,745,020

BUREAU OF BUILDING REPAIR
A.H. Ekerberg, Superintendent

FUNCTIONS
1 - Maintain and Repair Certain Public Buildings.
2 - Provide Maintenance and Repair Services and Personnel on an Interdepartmental Basis to other City Agencies.
3 - Provide Operating and Custodial Personnel in Certain Public Buildings.
4 - Conduct Engineering-Architectural Surveys and Prepare Reports on Certain Public Buildings.
5 - Paint Street Traffic Striping and Markings.
6 - Repair Certain Street Structures and Sidewalks fronting on City Property.
7 - Maintain Street-Name Signs.

PERSONNEL ALLOWANCE	
(a) Budgeted by Bureau	344
(b) Assigned from Other Bureaus	2
TOTAL	346

EXPENDITURES	
(a) Budgeted by Bureau	$2,549,255
(b) Funds from Other Sources	1,039,404
TOTAL	$3,588,659

BUREAU OF STREET CLEANING
B.M. Crotty, Superintendent

FUNCTIONS
1 - Clean Public Street Surfaces.
2 - Clean 5 Pedestrian Underpasses.
3 - Clean 2 Pedestrian-Vehicular Tunnels.
4 - Plant and Maintain Street Trees, Shrubbery and Ground Cover.

PERSONNEL ALLOWANCE	
(a) Budgeted by Bureau	383
(b) Assigned from Other Bureaus	2
TOTAL	385

EXPENDITURES	
(a) Budgeted by Bureau	$2,213,395
(b) Funds from Other Bureaus	53,316
TOTAL	$2,266,711

SUMMARY

Total Personnel Allowance	$ 1,169
Total Expenditures, less reimbursements . .	$9,481,981

MAINTENANCE AND OPERATION

Lawrence J. Archer, Assistant Director

The Maintenance and Operation division of the Department of Public Works is composed of the four bureaus of Sewer Repair and Sewage Treatment, Street Repair, Street Cleaning and Building Repair. Headquarters for this division have been located at 2323 Army Street since October 1, 1951. Functional and organizational relationships of the bureaus are indicated on the opposite page.

The Bureau responsibilities generally extend to the maintenance and repair of 813 miles of streets and 850 miles of sewers, except for such work as may be performed under contract by the Bureau of Engineering; the operation of 3 sewage treatment plants, 14 sewage pumping stations, 3 lift bridges over navigable waters and Broadway Tunnel; the maintenance and repair of 314 major size public buildings; the furnishing of custodial services to 31 public buildings and the maintenance of certain street-side trees, shrubbery and ground cover on public thoroughfares.

The work-load of the bureaus continued at about the same level as during the preceding year except that heavy and damaging rain storms imposed severe demands upon field crews. The past year's total rainfall of 36.48 inches has only been exceeded three times since the year 1849; namely 49.27" in 1861-62, 38.84" in 1867-68 and 45.85" in 1889-90.

The Maintenance and Operation Bureaus are staffed with 1147 employees in 83 civil service classifications, 16 employees assigned from other bureaus and 6 contract persons on hired trucks; a total of 1169 persons. The employment classifications cover technical, administrative, skilled crafts, clerical, maintenance, and custodial services. There was a net increase of 5 employees, in positions directly budgeted by the respective maintenance and operation bureaus over the number employed the previous year, as indicated in Tables A & B.

Daily operations are severely hampered by restrictions that impose high working costs in a number of instances. In most cases, these adverse circumstances could be remedied if appropriations were sufficient to permit spending a relatively small additional amount of money in order to gain substantial savings in work costs or increases in work performance. In last year's annual report several of the more serious operating deficiencies were described in detail. Briefly the principal handicaps continue to be as follows:

(a) Appropriations for Maintenance and Repair of Public Buildings are not Adequate to Properly Protect the City's Investment. As a result there is a mounting backlog of needed work postponed from year to year. Costly replacement becomes necessary in many cases that could have been avoided by orderly preventive maintenance, if funds had been provided.

(b) Facilities at the Public Works Maintenance Yard are Not Sufficient to Provide Efficient Operation. Improvements are necessary for centralizing activities and for additional work and storage spaces. A bond issue to provide funds for these facilities will be before the electorate on November 4, 1958 which will correct these deficiencies, if approved.

(c) Charter Limitation of $2000 for Repair Work by City Forces is too Restrictive. The present limitation produces numerous inefficiencies. City crews cannot carry out projects which, if undertaken, could reduce costs. The antiquated limiting allowance of $2000 should be increased to $5000.

(d) Appropriations are Insufficient for Proper Maintenance and Repair of Mechanical Equipment at the Southeast Sewage Treatment Plant. Deferred upkeep at this Plant may at any time result in extensive breakdowns with attendant necessity of not only by-passing the Southeast Plant with resultant diversion of raw sewage to Islais Creek, but may also require the by-passing of North Point Plant with consequent heavy pollution of the north shore area, including the beaches fronting on the Marina and Aquatic Parks recreational grounds.

(e) Lack of an Assistant Superintendent of Street Repair Restricts Means for Advancing Operating Efficiency. An Assistant Superintendent should be allowed the bureau in order to provide more needed field supervision; to develop and inaugurate new methods and procedures toward reducing unit costs of work and to improve programming and scheduling of work.

(f) Deferred Replacement of Obsolete Equipment Causes High Upkeep Costs. Replacement of equipment is often delayed until long after its economical useful life has ended and this results in making necessary costly repairs to keep the worn-out equipment in service.

(g) Lack of a Police Officer Assignment to the Bureau of Street Cleaning Reduces Bureau's Effectiveness in Meeting Litter Control Problem. The providing of this assignment would substantially aid in reducing the high cost resulting from carelessly and indiscriminately discarded litter. The annual cost of picking up avoidable refuse has been estimated to amount to about $375,000.

(h) Insufficient Numbers of Reserve Equipment Result in Costly Work Delays. Substantial waste of time and effort results during periods when the equipment breaks down or is in the shop for repairs and no equipment is available for replacement.

Net expenditures for maintenance and operation during the year amounted to a net total of $9,481,981, as indicated by Table

D. With an estimated total population of about 814,000 for the City and County of San Francisco, the year's expenditures for this segment of the department's activity amount to $11.65 per capita.

Appreciation is expressed to bureau personnel for their able response in meeting unusually difficult situations during the past winter storms. It is confidently expected that with the exemplary loyalty and devotion to duty displayed during past years, coupled with alert attention to continuing improvements in work techniques, our progress will continue.

CLIMATOLOGY

Rainfall has considerable bearing upon the extent and nature of field operations during winter months. The annual rainfall for San Francisco as recorded by the Federal Weather Bureau from June 30, 1957 to July 1, 1958 amounted to 36.48 inches as compared to a rainfall of 14.01 inches in 1956-57 and a norm of 20.51 inches. The past season was the wettest since 1889-90. Measurable amounts of precipitation fell on 97 days of the year. Monthly precipitation for the past year, compared to the average monthly precipitation recorded since 1850, both indicated in inches, is as follows:

Month	Precipitation 1957-58	Average Precipitation Since 1850
July 1957	.01	.01
August	Trace	.02
September	1.46	.28
October	3.46	.95
November	1.13	2.36
December	3.60	4.44
January 1958	4.38	4.69
February	7.78	3.67
March	8.22	3.08
April	5.47	1.55
May	.88	.68
June	.09	.15

Other climatic conditions had little effect on operations except that windy days added to the work load of street cleaners in picking up windblown paper trash and foggy days slowed the speed of vehicles on City business.

Records of the U. S. Weather Bureau show averages and extremes in other climatic conditions during the year, as follows:

(a) Temperatures averaged between 52.3° F and 63.4° F with an extreme high of 88° F and an extreme low of 41° F. The highest temperature recorded since 1900 was 101° F, the lowest 27° F.

(b) Wind velocities averaged 8.5 miles per hour with a maximum of 45 miles per hour, recorded. Prevailing direction of wind was from the west.

(c) Heavy fog, when upper visibility was less than 1/4 mile, occurred on 2 days.

(d) Relative humidity, at 8:00 A.M., averaged 80.6% with extremes between 74% and 87%.

TABLE A
POSITIONS ALLOWED BY ANNUAL SALARY ORDINANCES & AMENDMENTS
FISCAL YEARS 1953-54 THROUGH 1957-58

	1953 1954	1954 1955	1955 1956	1956 1957	1957 1958
Bureau of Sewer Repair and Sewage Treatment					
Sewer Repair	123	123	124	129	129
Sewage and Waste Treatment	*	102	102	102	106
Pumping Stations	10	11	12	12	13
TOTALS	133	236	238	243	248
*Transferred Dec. 3, 1954 to the Bureau of Sewer Repair without change in number of personnel.					
Bureau of Street Repair					
Street Repair (General)	151	148	144	151	150
Bridges and Tunnels	24	24	23	22	22
Interdepartmental Service	10	*	*	*	*
TOTALS	185	172	167	173	172
*Included in Street Repair (General)					
Bureau of Street Cleaning					
Street Cleaning	332	332	333	336	337
Streetside Planting	*	*	15	19	21
As Needed Service	25	25	25	25	25
TOTALS	357	357	373	380	383
*Transferred July 1, 1955 to Bureau of Street Cleaning					
Bureau of Building Repair					
Building Repair	166	175	186	187	187
Traffic Painting	21	21	21	21	21
Interdepartmental Service	130	134	134	138	136
TOTALS	317	330	341	346	344
TOTAL DIRECTLY BUDGETED BY MAINTENANCE & OPERATION BUREAUS	992	1095	1119	1142	1147
Assigned from Other Bureaus					16
Contract Persons on Hired Trucks					6
Total Allowance					1169

NOTE: Interdepartmental and As Needed Services are not established as continuing positions but are for services as required when funds are provided for the purpose involved.

TABLE B

CHANGES IN PERSONNEL FROM PREVIOUS YEAR

Bureau		Change
Sewer Repair and Sewage Treatment		
(a)	Addition of 1 Operating Engineer and 3 Junior Operating Engineers required to place sludge dryer operation on a 7-day work week from a previous 5-day work week exclusive of holidays	+4
(b)	Addition of 1 Operating Engineer for assignment to new Yosemite Pump Station	+1
Street Repair		
(a)	Decrease of 1 Curb Cutter no longer needed through use of improved facilities	-1
Street Cleaning		
(a)	Addition of 1 Chauffeur for newly purchased City truck as replacement of Chauffeur with hired truck	+1
(b)	Addition of 2 Gardeners to partially makeup deficiency of personnel necessary for proper care of plantings	+2
Building Repair		
(a)	Increase of 1 Locksmith and decreases of 1 Painter, 1 Foreman-Painter and 1 Sheetmetal Worker on Interdepartmental Services. Net decrease	-2
	TOTAL NET INCREASE IN POSITION ALLOWANCE	5

TABLE C

RENTED AND HIRED TRUCKS IN USE

Bureau	Hired Truck (with Driver)	Rented Truck (without Driver)
Sewer Repair and Sewage Treatment	5	-
Street Repair	1	-
Street Cleaning	-	-
Building Repair	-	6#
TOTAL	6	6#

#NOTE: Exclusive of 5 rented trucks replaced on May 1, 1958 with new City equipment.

TABLE D

SUMMARY OF EXPENDITURES

Bureau	Expenditure from Bureau's Budgeted Funds	Funds Expended from Other Sources	Total Expenditures
Building Repair (incl. Traffic Painting)	$2,549,255	$1,039,404	$3,588,659
Street Cleaning (incl. Streetside Planting)	2,213,395	53,316	2,266,711
Sewer Repair and Sewage Treatment	2,047,120	8,000	2,055,120
Street Repair (incl. Bridges and Tunnels)	1,661,318*	83,702	1,745,020*
TOTAL	$8,471,088	$1,184,422	$9,655,510
Less Expenditures made from Budgeted Funds and Reimbursed			173,529
TOTAL NET EXPENDITURE			$9,481,981

*Includes $78,614 of retirement charges applicable to other Special Road Improvement Fund functions (Gasoline Tax).

BUREAU OF SEWER REPAIR AND SEWAGE TREATMENT

B. Benas, Superintendent

The Bureau of Sewer Repair and Sewage Treatment maintains and repairs public sewers and appurtenances, operates and maintains sewage pumping stations and treatment plants, conducts sanitary surveys of shore waters, analyzes air samples for pollutants and regulates and controls industrial wastes discharge to sewers. Activities pertaining to sewers are under the Sewer Repair Division. Treatment plants and control of industrial wastes are under the Sewage Treatment Division and pumping stations are under the Sewage Pumping Division. No major changes were made during the year in Bureau activities or responsibilities.

In addition, the Sewage Treatment Division gives advisory and technical service to other departments of the City as listed below:

JUVENILE COURT DEPARTMENT

On operation of sewage treatment plant at Log Cabin Ranch in San Mateo County.

PUBLIC HEALTH DEPARTMENT

On operation of sewage treatment plant at Hassler Health Home in San Mateo County.

PUBLIC UTILITY COMMISSION

On operation of sewage treatment plant at San Francisco International Airport in San Mateo County.

RECREATION AND PARK DEPARTMENT

On operation of sewage treatment plant in Golden Gate Park.

SHERIFF'S DEPARTMENT

On operation and improvements to sewage treatment plant at County Jail No. 2 in San Mateo County.

Budgeted employments for the fiscal year were 106 for Sewage Treatment, 13 for Sewage Pumping and 129 for Sewer Repair, totalling 248. These employments were supplemented by one junior engineer and one clerk-typist for Sewer Repair and nine maintenance personnel for Sewage Treatment all from other Bureaus and Departments and five hired chauffeurs for Sewer Repair.

The chart on Page 102 shows the organization of the Bureau by major functions and personnel.

On June 30, 1958 the following held supervisory positions in the Bureau:

SEWAGE TREATMENT DIVISION

W.B. Jones	Senior Civil Engineer-Assistant Bureau Head
K. Fraschina	Superintendent, North Point Plant
B.S. Martin	Superintendent, Richmond-Sunset Plant
J.H. Crafts	Superintendent, Southeast Plant
C.P. Ferraris	Assistant Engineer, Industrial Wastes

SEWAGE PUMPING DIVISION

P.A. Esposito	Assistant Engineer

SEWER REPAIR DIVISION

W.C. Corwell	Acting Assistant Superintendent
J. Murphy	Acting Assistant Superintendent

Mr. Earl B. Bunting and Mr. William P. Juzix retired as Assistant Superintendents, Bureau of Sewer Repair, after three decades of City service. Their service and leadership were in large measure responsible for the effectiveness and efficiency of sewer repair operations.

The budget expenditures for the fiscal year totalled $1,930,702, of which $998,578 was for treatment plants and industrial wastes control, $107,071 for pumping stations and $825,053 for sewer maintenance and repair activities. In addition, the Sewer Repair Division expended $116,418 for side sewers paid for by property owners and $8,000 on work orders from other Departments.

		Division	
	Sewage Treatment	Sewage Pumping	Sewer Repair
Personal Services			
Permanent Salaries*	$539,104	$ 74,101	$ 68,445
Overtime*	1,283	142	3,699
Holidays*	14,729	3,550	462
Temporary Salaries*	24,656	2,924	
Wages (per diem)	86,712		603,731

	Sewage Treatment	Division Sewage Pumping	Sewer Repair
Contractual Services			
Power and Gas	122,881	18,846	
Plant Equipment	27,441	3,511	
Field Equipment	2,185	200	24,742
Landscape Maintenance	16,288		
Miscellaneous Services	2,963	991	4,320
Hired Trucks			37,048
Materials and Supplies			
Replacement Parts	22,368	1,108	562
Field	600		42,152
Plant	17,290	1,225	
Fuels and Lubricants	2,801	442	13,361
Treatment Chemicals	108,114		
Equipment			
New	3,513	31	5,201
Replacement	5,650		21,330
TOTAL	$998,578	$107,071	$825,053

*For monthly employees.

Unusually heavy rainfall severely taxed Bureau facilities as indicated below:

TREATMENT PLANTS

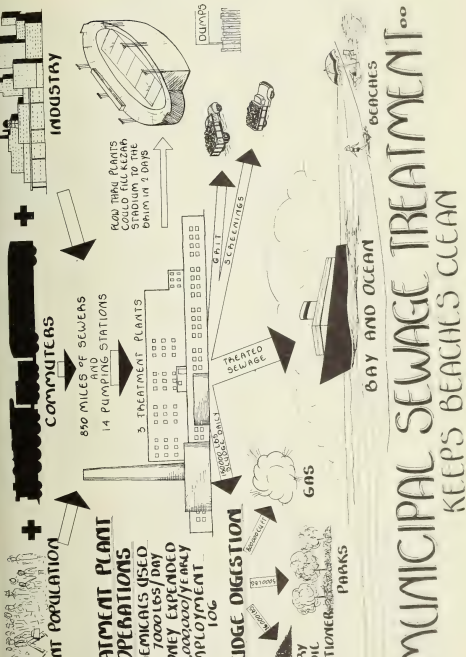
Operation was not seriously affected other than the need for handling greater than normal quantities of grit and screenings.

PUMPING STATIONS

Large quantities of sand and debris had to be removed tc keep the stations operating.

SEWER REPAIR

More than normal complaints, stoppages and breaks requirec services of all available personnel and equipment and resulted in increased overtime. Approximately 150 new mai sewer breaks were found after the heavy rains of Marcl and April. Unusual storm conditions in April and May made it necessary to borrow barricades from contractors tc protect damaged or dangerous areas. The need for a reserve supply available to all bureaus for emergency use is indicated.


RESIDENT POPULATION
+
COMMUTERS
+
INDUSTRY
850 MILES OF SEWERS AND 14 PUMPING STATIONS
3 TREATMENT PLANTS
FLOW THRU PLANTS COULD FILL KEZAR STADIUM TO THE BRIM IN 2 DAYS
TREATMENT PLANT OPERATIONS
CHEMICALS USED 7000 LBS/DAY
MONEY EXPENDED $1,000,000/YEARLY
EMPLOYMENT 106
150000 LBS SLUDGE DAILY
GRIT
SCREENINGS
DUMPS
TREATED SEWAGE
SLUDGE DIGESTION
800000 CU FT
GAS
16000 LBS
5000 LBS
DRY SOIL CONDITIONER
PARKS
BAY AND OCEAN
BEACHES
MUNICIPAL SEWAGE TREATMENT
KEEPS BEACHES CLEAN

The need for increased treatment plant maintenance, particularly at the Southeast plant became increasingly apparent during the fiscal year. It is anticipated that major plant units may become inoperative if additional funds for maintenance and repair are not provided. The pollution of receiving waters in violation of State regulations will result.

Industrial waste activities were confined to industries where specific violations were indicated. Checking of all industries on a scheduled basis will be delayed until additional personnel are available.

The appearance, operation and maintenance of sewage pumping stations were improved by continuing the policy, instituted in 1956, of having an operating engineer in charge of each of the three major sewerage districts.

Programming and work accomplishments in Sewer Repair were affected by the necessity of reassigning per diem personnel to supervisory positions because of sick leave and retirements. Operating efficiency of sewer repair activities was increased by adding a power driven sewer rodding machine, additional mine safety approved sewer lamps, a replacement eductor pump, additional tool boxes and a mobile repair truck.

The work load on investigations and inspections for the Bureau of Engineering increased. It was necessary for the Bureau of Engineering to assign additional engineering services to Sewer Repair several times in the year.

SEWAGE TREATMENT DIVISION

GENERAL

The Sewage Treatment Division operates the North Point, Richmond-Sunset and Southeast Sewage Treatment plants, controls discharge of industrial wastes, and advises on the operation of other sewage treatment facilities under the jurisdiction of other City departments.

The three plants operated continuously throughout the fiscal year except for limited shutdowns for repairs or construction. Sewage from all parts of the City is now treated with the exception of certain limited areas along the bayshore. Sewage from these areas will be treated as soon as collecting sewers and pumping stations, now under construction or planned for the future, are completed. On August 26, 1957 Yosemite Pumping Station went into operation, adding 560 acres and about 10,000 population to the drainage area of the Southeast plant. This station will ultimately contribute a dry-weather flow of about 4 mgd.

There were two personnel changes during the year in addition to minor redistributions. The position of Clerk-Stenographer at the Richmond-Sunset plant was reclassified to Clerk-Typist. One additional operating engineer and three additional junior operating engineers were added to the operating personnel at the Southeast plant. The additions at the Southeast plant were to enable the sludge drying operation to be placed on a continuous basis. The previous 5 days per week schedule did not permit the sludge to be disposed of as fast as it accumulated.

It is anticipated that with increased housing and the construction of recreational facilities in the southeast section of the City, the sanitary requirements for the condition of bay waters in that area will become more rigid. Therefore, a program of bacteriological work has been instituted at the Southeast plant laboratory to maintain a constant check on the sanitary condition of the shore water in that vicinity. Major bacteriological work is now being performed routinely at all three plant laboratories.

Operation of the treatment plants is being seriously affected by insufficient maintenance funds, which are not being increased commensurate with the age and needs of the plants. The backlog of painting for piping, equipment and structures has increased to the point where contract work or additional personnel are needed. Equipment cannot be maintained adequately with available machinists and replacement parts. In particular, the Southeast plant dryers are in need of immediate rehabilitation and continuous maintenance.

Engineering design for improvements is performed by the Bureau of Engineering. Major repairs and maintenance requiring the services of specialized crafts are done by other bureaus of the Department and by the Purchaser's shops. The Recreation and Park Department maintains landscaping at all plants under transferred funds.

SEWAGE TREATMENT METHODS

Each plant provides primary treatment for the removal of oil, grease, floating material, grit and settleable solids. Grit from all plants and screenings from the North Point and Southeast plants are hauled by truck to the garbage fill south of the county line. Screenings from the Richmond-Sunset plant are incinerated. At the Richmond-Sunset plant, sludge is digested in two-stage digestion, elutriated and dewatered by vacuum filtration. The filter cake is hauled to the City parks for use as a soil conditioner. Raw sludge collected at the North Point plant is pumped to the Southeast plant where it is treated together with the sludge collected at the Southeast plant. Sludge treatment at the Southeast plant consists of thickening, two-stage digestion, elutriation, vacuum filtration and flash drying. A small quantity of the dried sludge is used as a soil conditioner by other City departments. The balance is sold under contract as surplus.

The most important element of the primary sewage treatment process is sedimentation. Velocity of sewage flow in the network of conduits which make up the sewer system is high enough to keep in suspension light materials like grease and organic matter and heavier materials such as soil, and in some cases, even rocks. In grit tanks the velocity is reduced to about 1 foot per second by enlarging the channel. The carrying power of the water is reduced and some of the heavier materials, such as sand and grit, settle to the bottom and are collected by means of slow moving scrapers to one point where they can be readily withdrawn.

After removal of grit, sewage flows into large tanks called sedimentation tanks where velocity is further reduced to about 2 feet per minute. Sewage remains in the sedimentation tanks about 90 minutes during which the setteable solids are deposited on the bottom and grease and other light scum forming materials rise to the surface. The floating material is removed by light water sprays and mechanical skimming. Settled material is collected by mechanical scrapers and is withdrawn by pumping.

In Division plants, the sedimentation process removes about two-thirds of the solids suspended in the sewage. The remaining solids are too finely divided to settle out readily. The treated sewage is relatively clean and such impurities as remain can be readily disposed of in the receiving waters without nuisance. Sterilization by chlorine is used when required to meet bacterial standards at recreation areas.

TREATMENT PLANT OPERATION

The following table summarizes data on flows, material removed, chemicals added and products handled and power and gas purchased for the three plants.

SUMMARY OF TREATMENT PLANT OPERATIONS

	North Point	Richmond-Sunset	Southeast
Sewage Flow, million gallons			
Total (a)	17041 (b)	4968	7882
Avg. day	46.7	13.6	21.6
Avg. day, dry weather (c)	42.1	13.7	20.5
Max. day, wet weather	93.8	17.7(d)	31.8(d)
Max. day, dry weather	53.1	16.7	30.4
Max. rate, wet weather	124	30.0(d)	35 (d)
Max. rate, dry weather	71	27.8	31
Screenings, cu. ft.			
Total	27053	9697	32571
Max. day	199	52.0	296
Per million gallons	1.6	2.0	4.1

	North Point	Richmond-Sunset	Southeast
Grit, cu. ft.			
Total	72294	41688	56935
Max. day	1026	432	1377
Per million gallons	4.2	8.4	7.2
Chlorination, lbs. (e)			
Pre	457570	99060	52306
Post	740420	449580	-----
Process water (eff)	4090	------	-----
Total	1202080	548640	52306
Per million gallons (mg per liter dry weather) (f)	11.3	14.4	9.2
Sludge Solids, M lb. (dry)			
From sedimentation	32741	6401	25918 (g)
To digesters (h)	------	6401	40167
Filter cake	------	1253	12258
Dried sludge	------	------	9325
Ferric Chloride			
Total, lb.	------	56184	698607
% Filter cake solids	------	4.48	5.70
Gas Production, M cu. ft.			
Total	------	37197	224634 (i)
Avg. day	------	102	615
Power and Gas Purchased			
Power, total M kwh	5529.6	1694.8	4910.5
Power, avg/mo., M kwh	460.8	141.2	409.2
Natural gas, total C cu. ft.	79596	35295	141609
Natural gas, avg/mo., C cu. ft.	6633	2941	11801
Hauling			
Trips, grit and screenings	652	------	328
Trips, grit and filter cake	-------	611	-----
Trips, dried sludge	-------	------	304 (j)

NOTES

(a) For 365 days of operation at all three plants.

(b) Debris in Harrison St. sewer at 16th St. caused partial diversion to bay starting May 22 and continuing for balance of fiscal year.

(c) Omits from consideration days with .01 inch or more rainfall and days following those with .05 inch or more rainfall.

(d) Flow restricted during storms to avoid overloading grit handling facilities.

(e) Pre-chlorination continuous at North Point and Richmond-Sunset except for brief shut-downs for repairs. Post-chlorination at North Point March through November and during extended periods of dry weather in winter months. Post-chlorination continuous at Richmond-Sunset except during storms. Pre-chlorination for 29.8 days at Southeast. All chlorination discontinued at Southeast in November due to excessive chlorine demand of sewage.

(f) Reported in mg per liter to conform to standards of Federation of Sewage and Industrial Wastes Associations. Multiply values by 8.33 to obtain lbs per million gallons for comparison with previous reports.

(g) Includes recirculating load from raw sludge thickening and digested sludge elutriation overflows.

(h) From raw sludge thickening.

(i) Estimated. Not all gas metered due to relief valve blowoff.

(j) Hauling 1,712.3 tons used by City. Contractor hauled 3,282.1 tons sold to him at $1.10 per ton.

RESULTS OF OPERATION

Bay and ocean waters in the vicinity of the treatment plant outfalls and at nearby beaches remained in excellent condition during the fiscal year. Waters are safe for bathing along the ocean beach and nearby north shore beaches, and at Aquatic Park at all times except when storm overflow occurs during the winter season. Bay waters in the vicinity of Islais creek continued to meet State Regional Water Pollution Control Board requirements, but the waters within Islais Creek occasionally do not.

COST OF OPERATION

Total expenditure for the fiscal year was $998,578. The cost was distributed as follows:

Personal Services	$666,484
Heat, Light and Power	122,881
Contractual Services	48,877
Materials and Supplies	151,173
Equipment	9,163

Based on a connected population of 770,000 the cost of operation was approximately $1.30 per capita.

IMPROVEMENTS

The following major improvements were made at the treatment plants during the fiscal year. Work done under contract by the Bureau of Engineering is indicated by the symbol (E).

NORTH POINT PLANT:

Dewatering pump suctions in the main lift pump sumps were lowered to permit more rapid dewatering. (E)

Machinery guards on the sedimentation and grit tank drives were replaced by pipe rail guards.

Spray water piping in four sedimentation tanks was sandblasted and repainted.

Dewatering sump pumps were installed in the overflow structure. (E)

Two additional sand pumps were installed with separate discharge hoses to provide adequate standby. (E)

An air line was installed to the west end of the sedimentation buildings to provide for air motor operation of the inlet gates.

RICHMOND-SUNSET PLANT:

Piping and controls for the sand pumps were altered to permit the simultaneous operation of two pumps. (E)

The sand washer in the Pretreatment Building was altered to permit increased capacity. (E)

Alterations and additions to the Administration Building provided a lunch room, increased laboratory space, and more adequate office space for administrative personnel. (E)

Windows and metal sash in the Pretreatment Building were replaced with wooden sash because of extensive corrosion. (E)

SOUTHEAST PLANT:

Mechanical alterations were made to the east bar rack slowing the operation to prevent damage to the rake mechanism.

The water tank and tower was repainted and lined. (E)

One half of the hand rails in one of the sedimentation buildings was galvanized. (E)

The ventilating system in the Receiving and Thickening Building was altered to improve working conditions. (E)

SPECIAL STUDIES AND INVESTIGATIONS

1. Completed:

A check of the currently used method for the measurement of oxidants in air pollution studies.

Studies of the variation of chlorine demand during a typical day at the Southeast plant.

Study of tannery wastes particularly as it affects treatment plant chlorine demand.

A study for the Bureau of Engineering of the location and identification of water and sewage leaks at the Stockton Street tunnel.

A study of the heat of combustion of sludge for the Bureau of Engineering.

A study of methods for mixing ferric chloride with digested sludge.

2. In Progress:

The effect of varying the rate of preaeration before sedimentation on sulfides, pH, dissolved oxygen, chlorine demand, and on removal of grease, suspended solids and 5-day B.O.D.

The effect of mechanical flocculation on sedimentation.

Comparison of dacron, dynel and wool as a blanket material for vacuum filters.

Optimum rate of pre-chlorination for odor control.

A study of the identification of ground water in various parts of the City.

3. Continuing:

Source identification in leak and seepage complaints received by the Bureau.

Analysis of industrial wastes.

Chemical and bacteriological survey of shore waters. (This work was greatly increased during the year by the commencement of a program of bacteriological study at the Southeast plant.)

4. Air Pollution:

The Richmond-Sunset plant, in cooperation with the Bureau of Air Sanitation, California State Department of Public Health, continued to collect detailed records of wind direction and oxidant values comprising a base level of air pollutants reaching San Francisco and corresponding values for portions of the City in which the air has become polluted in varying degrees. All data collected was supplied to the Bay Area Air Pollution Control District. The plant superintendent continued to act as technical advisor to Supervisors William C. Blake and Clarissa S. McMahon, Board members of the Bay Area Air Pollution Control District.

A program for the analysis of the data collected has been planned in conjunction with the use of available IBM equipment.

INDUSTRIAL WASTES

Because of personnel limitations, investigations were primarily limited to specific complaints and ordinance violations. Only 650 of the 3,900 industries contributing wastes were inspected during the year. Two additional inspectors are needed for adequate continuing inspection and control of industrial wastes. Control is needed to prevent deposition in and damage to sewers, to protect health and safety of sewer workers, to exclude materials adversely affecting treatment plant operation or costs, and to prevent harmful effects on receiving waters.

Major waste control projects completed by industry during the year were:

1. A tannery has modified operations and scheduled equipment modernization to remove hair and fleshings and to reduce chemicals creating excessive chlorine demand.

2. A chemical plant is constructing a unit scheduled for completion July 1958 for removal of over six tons of inorganic solids now being discharged daily to the sewer.

3. A coffee catering plant is now hauling away coffee grounds which previously caused a series of sewer stoppages.

4. The Pacific Gas and Electric Company has installed an oil separator at the Hunters Point generating station to strip grease and oil from plant wastes before discharge to the Bay.

5. Contamination of Aquatic Park was reduced by filling an opening under the municipal pier.

Wastes discharged from restaurants, hotels, gasoline stations, garages and auto washing continue to be troublesome.

A survey of sewage characteristics in the Southeast drainage district was completed and key manholes related to sub-drainage districts have been established to enable the rapid identification of sources of harmful wastes.

Performance tests of domestic and commercial garbage grinders for compliance with Ordinances 7425 and 7988 continued.

SEWAGE PUMPING DIVISION

The Sewage Pumping Division operates and maintains 14 stations to boost sanitary flow and some storm runoff to main interceptors leading to the treatment plants. The new Yosemite Pumping station described below was placed in operation as a unit in the Southeast District on August 26, 1957. Descriptive information for other stations may be found in the Annual Reports for 1952-53, pages 86 to 92 inclusive; 1953-54, pages 96; 1954-55, pages 116 and 117; and 1955-1956, page 111.

YOSEMITE PUMPING STATION

The Yosemite Pumping station is located at the corner of Yosemite Avenue and Ingalls Street, and has a contributary area of 560 acres extending generally westerly to Third Street.

Design capacity is 13 mgd, which includes storm water runoff equivalent to 0.02" per hour. Present daily flow is 700,000 gallons. This will increase materially with expected development of the area when the new San Francisco Giants baseball Stadium is completed.

The station has three 8" vertical single stage, single speed, centrifugal pumps rated at 400 gpm against a total dynamic head of 36 feet and driven by 50 HP, 440 volt, 3 phase, 60 cycle, electric motors at 870 rpm. The station discharges through a 20 inch force main into the 4' x 6' sewer at Thomas Avenue and Ingalls Street.

PERSONNEL

One additional Junior Operating Engineer was employed when the Yosemite Pumping station was placed in operation. The following table shows distribution of personnel and stations by districts:

District	Stations
North Point	
1 Operating Engineer 5 Junior Operating Engineer	Hyde Commercial* Marina*
Richmond-Sunset	
1 Operating Engineer 2 Junior Operating Engineer	Fulton Lakeshore Park Merced Pine Lake Sea Cliff 1 Sea Cliff 2 Vicente
Southeast	
1 Operating Engineer 2 Junior Operating Engineer	Fitzgerald Hunters Point Mariposa Yosemite

* Assigned shifts
Others: roving assignments

MAINTENANCE AND REPAIRS

Major repairs and maintenance requiring the services of specialized crafts are done by other bureaus of the Department and by the Purchaser's shops. Major items completed in the year were:

Fulton

Replaced damaged water pressure control and repaired motor control.

Hunters Point

Repaired motor controls and replaced sump baffle.

Lakeshore

Overhauled main valves and motor controls.

Marina

Replaced hydraulic valve control lines and repaired hydraulic valves and motor controls.

Mariposa

Repaired motor controls.

Park Merced

Repaired pumps and ventilating system.

Sea Cliff 2

Repaired pumps and motor controls.

PROPOSED IMPROVEMENTS

Proposed improvements are the same as listed on Page 119 of the 1956-1957 Annual Report. Funds for these improvements were not allowed this fiscal year and will be requested again next fiscal year because of the urgency of the need.

Table I shows individual expenditures and unit cost data.

SEWER REPAIR DIVISION

The Sewer Repair Division cleans sewers and catchbasins, maintains and repairs main sewers and structures, installs and repairs side sewers, tests for explosive and other gases and does other work related to operation and maintenance of the sewerage system. Maintenance and repair problems are peculiar to San Francisco and cannot be compared directly with other communities because (a) most sewers are combined, (b) nature of the material entering sewers, (c) age and type of construction of main and side sewers, (d) sandy soil in the westerly portion of the City and (e) topography.

There are over 850 miles of main sewers. Most of these are combined sewers handling both surface runoff and sanitary sewage. Separate sewers are located in part of the lower Market Street area and in other isolated areas. Main sewers range in size from 6 inch vitrified clay pipe to three-compartment reinforced concrete sewers with 7-1/2' by 10' compartments. During rain, excess storm flow is diverted to the bay or ocean through 16 outfalls.

Continually increasing traffic, particularly in the downtown area and on major thoroughfares, affects sewer repair and maintenance operations. At some locations work hours are controlled; at others heavy traffic impedes work progress.

Maintenance and repair activities are separated into nine work units based on type of work.

Table II shows work distribution, total expenditures by work units and unit costs where applicable. Unit costs include general department overhead and prorated allowance for equipment.

SEWER CLEANING

6 crews of 2 Sewer Cleaners 1 Laborer	6 1-1/2-ton trucks with tugger, hoist, booms, and cable 1 hired material truck and driver

Sewer cleaning crews clean main sewers, sumps and tanks at pumping stations and treatment plants, do miscellaneous work in connection with sewers and service complaints occasioned by rains when service crews cannot handle all calls.

Sewers are normally cleaned by buckets dragged between manholes. Other methods employed are manual cleaning of large sewers, and flushing and rodding of pipe sewers.

Crews spent 92.5% of the time cleaning sewers and 7.5% on other operations. During the fiscal year 157,390 linear feet of sewer were cleaned, mainly on scheduled operations in the south of Market, central Mission and north Sunset areas. Considerable time was spent on cleaning sewers serving the Fishermans Wharf area and at other locations where frequent cleaning is required.

EDUCTOR OPERATIONS

8 crews of 1 Chauffeur 2 Laborers	8 operating eductors 2 standby eductors

Eductor crews clean catch basins, pump out basements and sumps, pump flow during main sewer repairs, wet down trenches when hydrant water is not accessible and do other miscellaneous sewer work.

Catch basins are cleaned by truck mounted Elgin eductors powered by 80 HP gasoline engines driving sand pumps. Solids removed are collected in a 1,500 gallon tank on the eductor. The solids and liquid are disposed of at dumps. Attachments and valving make the eductor adaptable for direct pumping and high pressure flushing.

Crews spent 75.0% of the time cleaning catch basins and 25.0% on other work. A total of 18,490 basins were cleaned, most in continuation of the regular cleaning program started in 1955 and described on page 114 of the 1954-1955 Annual Report. Non-scheduled cleaning is required in basins (a) with heavy deposits from storm flow, (b) with plugged grates and (c) when used for unlawful refuse disposal.

A two-reel eductor, first of its type in the west, was placed in operation in August 1956 to clean catch basins on both sides of one-way streets and alleys while travelling in one direction. It is used primarily in downtown areas. Another unit of this type will be put in service in July 1958.

SERVICE CREWS

5 crews of 1 Sewer Cleaner 1 Chauffeur 1 Laborer	5 service trucks with utility bodies

Service crews service complaints from public and other sources, wet down main and side sewer trench backfills, flush sluggish or temporarily plugged pipe sewers and do emergency work.

Each crew has a compartmentized, covered, one-ton truck fully equipped with hoses, lights, barricades, rods and special tools.

Four crews are on regular day work and one on night work. Weekend work is scheduled only during impending wet weather. During the year a Civil Service Commission ruling changed composition of a crew from one sewer cleaner and two laborers to one sewer cleaner, one chauffeur and one laborer.

Service crews spent 48.0% of the time on service calls and 52.0% on other work. During the year a total of 8,756 calls were made, 6,429 on complaints and 2,327 on other work.

The following tabulation shows the breakdown of work done by type of work and number and percent of calls.

	CALLS			
TYPE OF WORK	NUMBER		PERCENT	
Side Sewer				
Relieve clogged sewer	2,492		28.5	
Found trouble inside property	633		7.2	
Wet down construction backfill	287		3.3	
Determine if side sewer exists	225		2.5	
Found side sewer broken	208	3,845	2.4	43.9
Main Sewer				
Found main sewer broken	476		5.4	
Relieve clogged sewer	463		5.3	
Examine condition	379		4.3	
Wet down construction backfill	280	1,598	3.2	18.2

TYPE OF WORK	CALLS			
	NUMBER		PERCENT	
Catchbasins and Manholes				
Remove obstructions	445		5.1	
Replace cover	301		3.4	
Silence noisy cover	286		3.3	
Examine condition	95	1,127	1.1	12.9
Miscellaneous				
Service lights and barricades	812		9.3	
Investigate seepage and leaks	500		5.7	
Clean at pumping stations	369		4.2	
Not classified	260		3.0	
Deliver materials to jobs	172		2.0	
Remove deposits on sidewalks	73	2,186	0.8	25.0
TOTAL		8,756		100.0

MAIN PIPE SEWERS

12 Cribber crews of
25 Cribbers
1 Chauffeur

Air compressor and tools
Miscellaneous tools
3 hired material trucks and drivers

Cribbing crews excavate, lag and backfill main sewer trenches; excavate, lag and backfill for construction or repair of structures; cut pavement; and do miscellaneous work.

Main pipe sewers repairs are mainly required on vitrified clay pipe. Breaks occur from scour, open joints, settlement, or poor house connections. Scour is prevalent on streets with steep slopes serving previously undeveloped areas; open joints and settlement occur mainly in old sewers; and poor house connections are found when the connection was made by private contractors before regulations required City installation or inspection.

Trenches are excavated by hand except in special instances where rented equipment is used. Lagging is normally placed horizontally. Vertical lagging is used in deep trenches and when the water table extends into the excavation.

Two cribbers usually constitute a crew but may be supplemented by additional cribbers or laborers.

In the year 9,295 linear feet of sewer were replaced or repaired at 553 locations.

BRICKLAYER WORK

4 crews of
  1 Bricklayer
  2 Hodcarriers
2 crews of
  1 Bricklayer
  1 Hodcarrier

2 1-1/2-ton trucks
Bricklayer tools

Bricklayer crews repair main brick sewers, construct and repair manholes and catch basins, lay pipe over 8" in diameter and do bricklayer work required for the Bureau of Street Repair.

Underground crews have one bricklayer and two hodcarriers. Top crews of one bricklayer and one hodcarrier work on structures and lay pipe. The two 1-1/2 ton trucks are assigned to the top crews.

The 76 miles of brick sewers constructed before 1906 require continual maintenance. Most deterioration results from failure of the lime mortar originally used and from scour. More than the normal number of brick sewer breaks were found after the heavy storms of March and April.

In the year 17,070 linear feet of sewer were repaired, 27 structures built and 703 structures repaired.

SIDE SEWERS

6 or more crews of
  2 Cribbers

2 1-1/2-ton trucks with
  air compressors
Miscellaneous tools
1 hired truck with
  driver

Side sewer crews excavate, lag and backfill side sewer trenches, and lay side sewer pipe. Two cribbers normally constitute a crew, but may be supplemented by additional cribbers or laborers when required. The number of crews employed depends on the number of side sewers being built or repaired. At present only two crews are motorized. The trucks carry sufficient tools, equipment and material to complete a job and move without delay. Non-motorized crews must be moved to the job and have materials delivered.

The side sewer from the building to the main sewer belongs to the property owner. By City Ordinance all installation and repair work under City streets on side sewer connections must be performed by this Bureau except where side sewer construction is included with main sewer construction under public contract. Before any work is started the property owner deposits with the

Central Permit Bureau the estimated cost for constructing the side sewer from the curb and connecting to the main sewer. Final payment covers only actual costs.

During the year 336 side sewers were installed, 129 side sewers repaired, and 51 connections made.

GAS DETECTION

1 crew of
  1 Water Chemist
  1 Laborer

1 route van truck
Gas detection equipment

The gas detection crew tests sewer manholes, pumping stations, treatment plants, and other miscellaneous structures for explosive gas, carbon monoxide, hydrogen sulfide, and oxygen deficiency; checks for specific industrial wastes in sewers; assists in safety training; and checks manholes and sewers for condition. Natural gas leaks are reported to the gas utility company and testing is continued until the condition is corrected. Clogged sewers, loose bricks, and sludge deposits in manholes are reported to other sections.

Tests, testing methods, and equipment used are described in detail on pages 92-95 of the 1952-53 Annual Report.

During the fiscal year 9,742 manholes were tested; 234 had concentrations of methane below limits considered explosive (concentration 0.15% to 1% methane); 103 contained methane in concentrations considered dangerous (1% to 15% methane); 6 manholes contained carbon monoxide and 6 manholes were deficient in oxygen.

The gas detection unit was on night operation between March 10th and April 4th, 1958 to survey downtown areas with heavy daytime traffic. During this period 1,408 manholes were tested, of which 13 contained dangerous concentrations of methane. Night testing will be scheduled yearly.

Almost without exception, presence of methane in sewers results from leaks in natural gas mains or services.

SEWER STRUCTURES

Repair of outfalls and other structures that cannot be made by the Bureau are done by other bureaus and departments under contractual services. Outfall structures with tide gates, used for discharge of excess storm flow and preventing tidal backup, are checked annually.

MISCELLANEOUS

This work covers miscellaneous functions such as yard service, placing barricades and warning lights, and other work not regularly scheduled or normally assigned.

STUDIES AND IMPROVEMENTS

Field operations are continually being studied to determine what manual operations might be performed better mechanically.

Other studies in progress are:

> Adaptation of field operations reporting to IBM accounting.
>
> Use of sewer balls propelled by flow in sewers less than 21" diameter on relatively flat grades.
>
> Means for photographing interiors of main sewers.

TABLE I
SEWAGE PUMPING STATIONS

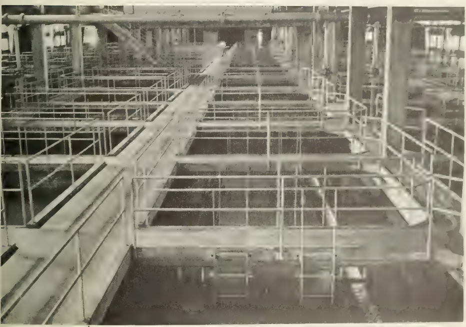
Location	Drainage Area Acres	M.G. Pumped	UNIT COST PER M.G. PUMPED PER						EXPENDITURES					
				Contractual						Contractual				
			Salaries	Mtc'e.	Power & Light	Materials & Supplies	Equipment	Total	Salaries	Mtc'e.	Power & Light	Materials & Supplies	Equipment	Total
General	-	-	$ 1.73	$ .08	$ -	$ .04	-	$ 1.85	$ 6,609.74	$ 307.54	$ -	$ 146.67	-	$ 7,063.95
Commercial	93	376	45.55	.55	3.21	.75	-	50.06	17,125.58	209.43	1,206.24	280.95	-	18,822.20
Fitzgerald	30	17	208.32	4.23	8.19	4.42	-	225.16	3,541.52	71.92	139.20	75.09	-	3,827.73
Fulton St.	82	53	41.25	1.31	13.36	1.42	-	57.34	2,186.32	69.20	707.92	75.65	-	3,039.09
Hunters Pt.	90	125	29.32	.58	5.71	1.07	-	36.68	3,665.50	71.92	713.60	133.83	-	4,584.85
Hyde St.	14	64	33.36	4.75	3.68	.66	-	42.45	2,134.73	303.89	235.44	42.73	-	2,716.79
Lakeshore	152	171	13.62	4.15	6.81	.62	-	25.20	2,328.29	710.14	1,164.80	106.52	-	4,309.75
Marina	1,125	2,129	8.16	.85	3.12	.42	-	12.55	17,381.87	1,810.91	6,644.06	471.97	-	26,308.81
Mariposa St.	117	280	13.28	.26	5.37	.50	-	19.41	3,719.37	71.92	1,504.00	140.35	-	5,435.64
Park Merced	212	125	19.16	3.43	24.58	1.92	-	49.09	2,395.11	428.82	3,072.91	239.78	-	6,136.62
Pinelake	3	5	426.71	18.64	23.04	14.31	-	482.70	2,133.56	93.22	115.20	71.57	-	2,413.55
Sea Cliff #1	4	12	171.37	6.22	6.14	4.89	-	188.62	2,056.48	74.58	73.64	58.65	-	2,263.35
Sea Cliff #2	83	123	69.02	3.29	12.46	.95	-	85.72	8,489.83	404.49	1,532.80	116.71	-	10,543.83
Vicente St.	52	98	21.85	.73	5.73	1.40	-	29.71	2,141.00	71.89	561.60	137.04	-	2,911.53
Yosemite	527	234	20.43	.44	5.02	.83	-	26.72	4,781.04	104.01	1,174.47	193.90	-	6,253.42
TOTALS	2,584	3,812	$ 21.17	$ 1.26	$ 4.94	$ .60	-	$ 27.97	$80,689.94	$4,803.88	$18,845.88	$2,291.41	-	$106,631.11

TABLE II
SHOWING WORK DISTRIBUTION AND COST
SEWER REPAIR DIVISION

WORK UNIT		Per Cent			Totals		Cost per Unit
1	SEWER CLEANING	92.5	Cleaning Sewers	$116,771		157,389 lin. ft. cleaned	0.74
		7.5	Other work	9,477	$126,248		
2	EDUCTOR	75	Cleaning catch basins	145,756		18,487 C B's cleaned	
	OPERATIONS	25	Other work	47,832	193,588		7.88
3	SERVICING	48	Servicing complaints	69,790		6,429 Complaints	10.85
	COMPLAINTS	52	Other work	74,799	144,589		
4	REPAIRING MAIN PIPE SEWERS	100	Repairing Sewers	235,657	235,657	9,293 lin. ft. at 553 locations	25.36
5	REPAIRING BRICK	68	Repairing brick sewers	100,886		17,070 lin. ft. repaired	5.91
	SEWERS	4.5	Building basins	6,606		12 Basins built	550.53
		8.3	Building manholes	12,364		15 Manholes	824.27
		8.5	Repairing basins	12,529		255 Basins repaired	49.13
		10.5	Repairing manholes	15,532		448 Manholes repaired	34.67
		0.2	Concrete sewers	238	148,155		
6	REPAIRING AND	71	Installations	85,117		336 Installations	253.00
	INSTALLING SIDE	25	Repairs	29,242		129 Repairs	226.00
	SEWERS	4	Connections	5,017	119,376	51 Connections	98.00
7	GAS DETECTION	73	Testing manholes	10,931		9,742 Manholes tested	1.12
	SURVEY	27 Misc.	tests & other work	3,987	14,918		
8	MAINTAINING AND REPAIRING STRUCTURES	100	Repairing and maintaining structures	2,915	2,915		Not applicable
9	MISC. WORK NOT REGULARLY FORSEEN			50,330	50,330		Not applicable
	TOTAL FOR WORK UNITS 1 TO 5 AND 7 TO 9			$916,400			
	TOTAL FOR WORK UNIT 6			119,376			
		GRAND TOTAL			$1,035,776		

NOTE: C/B = Catchbasin

CLEANING MAIN SEWER WITH POWER RODDING MACHINE



SEDIMENTATION TANK AT NORTH POINT SEWAGE TREATMENT PLANT

BUREAU OF STREET REPAIR

F. D. Brown, Superintendent

FUNCTIONS

The functions of the Bureau of Street Repair continue to be substantially as stated in previous reports.

Routine work includes the maintenance and repair of streets and appurtenant structures such as gutters, curbs, retaining walls, public stairways, pedestrian underpasses and overpasses, guard rails and fences; the maintenance of City dumps; the maintenance and operation of lift bridges and tunnels.

Work ordered by the Director includes traffic channelization, minor street alterations, minor construction and emergency work for the protection of the City and/or the public.

Work performed for other departments or bureaus includes the repair of pavement in Municipal Railway track areas, the repaving of trenches opened by the Bureau of Sewer Repair for the installation or repair of side sewers, the repair of state highways within the City and the repair of pavements in school yards and the yards of other City institutions. The Bureau also performs other minor services of varied nature.

The City's charter provides that work on any one job shall not exceed a cost of $2,000. It also prohibits work on unaccepted streets, except in emergency, and on sidewalks in front of private property. Unaccepted streets are those streets that have not been properly improved and officially accepted for maintenance and repair by the City.

Activities are further limited by state law governing the expenditure of monies from which the bureau is financed.

Maintained road mileage is as follows:

Secondary Streets	(Secondary Roads)	614.12 miles
Major Streets	(Primary Roads)	184.45 miles
State Highways		14.37 miles
	TOTAL	812.94 miles

ORGANIZATION AND PERSONNEL

At the start of the year it was anticipated that lights and barricades would be serviced by a laborer. However, the chauffeur's union objected because the operation of a pickup truck was involved. The Civil Service Commission was assured that a chauffeur would perform the duties of the position. Appropriation and salary ordinance amendments creating one position of chauffeur and abolishing one position of laborer were approved September 18, 1957.

Total employments in the bureau have decreased from 244 in 1949-50 to 173 in 1957-58. A large part of this decrease was supposedly made possible by increased mechanization. Although mechanization has been increased, the number of operators (chauffeurs, hired truck drivers and engineers) was reduced from 39 to 37 during the same period. One additional engineer would permit doing a considerable amount of work by machine that now must be done less efficiently by hand; also, considerably more work could be accomplished.

The assignment of chauffeurs, always a problem, has been further complicated by the substitution of City owned trucks for certain trucks previously hired with operators. The City's charter provides that wage scales be the same as those paid in private industry pursuant to union agreement. As of June 30, 1958, the latter ranged from $22.00 per day to $30.80 per day, dependent upon the type of equipment operated. Civil Service and Department policy is to assign senior employees to the higher paying equipment, particularly if the assignment is to continue for as long as three weeks. There are presently nine rates of pay for chauffeurs within the department, seven within this bureau. During the year, thirty-nine chauffeurs were hired, laid off, loaned, reassigned or transferred to or from the Bureau of Street Repair, involving 134 transactions in addition to many reassignments within the bureau. The bureau's normal compliment of chauffeurs, as provided by salary ordinance, is thirty-two.

SUPERVISION

It is regrettable that each year it is necessary to repeat that this bureau is badly in need of an assistant superintendent.

The preparation of budgets, work programs, reports, specifications and estimates; the investigation of certain complaints and job problems; the study of equipment to be procured; and an increasing amount of office work, including all correspondence, presently demand so much of the superintendent's time that he is seldom free for field supervision. Planning and assigning work for as many as eleven crews, travel time and time spent investigating jobs and complaints, leave little time for actual supervision by general foremen.

Duties mentioned above, as presently being performed by the superintendent, are not within the scope of, nor should they be imposed upon, a general foreman. However, assignment of a major portion of them to an assistant superintendent would be proper.

Provision of an assistant superintendent to assume a large part of the duties now being performed by the superintendent would accomplish the following ends:

1. Free the superintendent for the more important job of field supervision
2. Provide time for the superintendent to develop and inaugurate new methods and procedures to reduce costs or accomplish more work.
3. Permit the compiling of useful and sometimes essential information that is not now available.
4. Improve programming and scheduling of work.
5. Make available at all times a person authorized to make important decisions.

FUNDS AND EXPENDITURES

Funds for the operation of the Bureau of Street Repair are budgeted prior to the start of the fiscal year and appropriated from a Special Road Improvement Fund.

The Special Road Improvement Fund is composed of monies from several sources but all derived from motor fuel taxes, certain motor vehicle fees and certain fines and forfeitures resulting from vehicle code violations. Monies from this fund can be used only for roads and appurtenant structures.

The Bureau does a considerable amount of "off road" work for other agencies. The Road Fund is appropriately reimbursed by the agency served.

During the past five years, wage rates have increased 35.6% and materials prices 29.6% which, combined in proper ratio, is equivalent to a cost increase of 34.4%. However, it is interesting to note that total expenditures for road repairs have increased only about 24.9%.

Expenditures for road materials have increased more rapidly than have materials prices; expenditures for wages have increased less rapidly than have wage rates. Accomplishment of more work with less labor is thereby indicated.

The accompanying tabulations show expenditures for each of the several budgeted items during the past five years. Percentage increases for road repair costs, wage rates and materials prices are shown with the tabulation of expenditures for "street repair". Percentage increases for bridge and tunnel maintenance and operation costs and for salary rates are shown with the tabulation of expenditures for "bridges and tunnel".

EXPENDITURES STREET REPAIR

BUDGET ITEM	1953 - 54	1954 - 55	1955 - 56	1956 - 57	1957 - 58
Permanent Salaries	$ 39,978	$ 40,955	$ 32,553 (1)	$ 34,674	$ 37,467
Allowance for Overtime	107	48	239	96	163
Allowance for Holidays	598	534	462	491	582
Temporary Salaries	420	208	196	567	387
Wages	640,511	646,058	666,307	741,171 (2)	828,833
Contractual Services	76,207	80,173	86,982	100,535	84,242
Auto Mileage - Employees' Cars			76	80	61
Truck Hire	45,559	52,278	53,976	36,115 (2)	10,271
Materials & Supplies	175,301	171,461	207,512	225,332	250,653
Equipment	31,408	30,002	25,388	51,836	48,223
Accident Compensation	5,936	6,636	12,073	7,889	8,187
Retirement Allowance (3)	135,991	152,129	161,981	177,237	202,300
Services of Other Departments	8,468	9,006	14,565	17,812	19,787
Retroactive Wages		3,482	135		
Sub-total	$1,160,484	$1,192,970	$1,262,445	$1,393,835	$1,491,156
Improvements	23,200	371,522	38,837	16,292	3,158
Gross Expenditures	$1,183,684	$1,564,492	$1,301,282	$1,410,127	$1,494,314
Deduct Retirement Allowance, Equipment and Improvements	190,599	553,653	226,206	245,365	253,681
Use to Determine Percentage Increases in Road Repair Costs	$ 993,085	$1,010,839	$1,075,076	$1,164,762	$1,240,633
Road Repair Costs; % Increase:					
Over Previous Year		1.8	6.4	8.3	6.5
Over 1953-1954		1.8	8.3	17.3	24.9
Wage Rates; % Increase:					
Over Previous Year		9.9	4.6	8.7	8.5
Over 1953-1954		9.9	14.9	25.0	35.6
Materials Prices; % Increase:					
Over Previous Year		-3.3	12.9	5.3	12.8
Over 1953-1954		-3.3	9.1	15.3	29.6

1. Two operating engineers deleted when new asphalt plant was put into service.
2. Six hired trucks replaced with City owned trucks; 1-9/19/56, 4-2/5/57 and 1-3/15/57
3. Includes retirement allowance for other bureaus and departments.

EXPENDITURES BRIDGES & TUNNEL

BUDGET ITEM	1953 - 54	1954 - 55	1955 - 56	1956 - 57	1957 - 58
Permanent Salaries	$ 113,952	$ 112,220 (1)	$ 110,232 (2)	$ 114,986	$ 120,242
Allowance for Overtime	30	31	-	12	43
Allowance for Holidays	3,727	3,562	3,537	3,714	5,790 (3)
Temporary Salaries	6,725	6,425	10,148	13,560	10,167
Contractual Services	46,892 (4)	18,814	17,377	17,170	21,005
Materials & Supplies	2,885	2,731	2,622	2,073	1,200
Equipment	428	-	-	-	-
Services of Other Departments	6,261	6,714	6,541	7,992	8,557
Total Expenditures (5)	$ 180,900	$ 150,497	$ 150,457	$ 159,507	$ 167,004
Deduct Special Repairs - Note 4	33,325				
Use to Determine Percentage Increases in M & O Costs	$ 147,575	$ 150,497	$ 150,457	$ 159,507	$ 167,004
Expenditures; % Increase					
Over Previous Year		2.0	-	6.0	4.7
Over 1953-54		2.0	2.0	8.1	13.2
Salary Rates; % Increase					
Over Previous Year		2.9	5.8	5.1	4.0
Over 1953-54		2.9	8.9	14.4	19.0

1. 4th St. Bridge taken out of service 8 p.m. to 4 a.m., 7/1/54
2. One part time Operating Engineer released, watchman substituted for Operating Engineer on Tunnel 3 days per week.
3. Rate increased from "straight time" to "time and one half".
4. Includes $33,325 for abnormal repairs to Islais Creek Bridge.
5. Retirement Allowance included in Street Repair budget.

EQUIPMENT

New equipment procured during the year includes an asphalt mixture heater, an asphalt spreader and a pneumatic tired roller.

The asphalt mixture heater is a Model 30-R "Heat-a-Mix" tailgate mixer. This mixer is composed of a two cubic foot charging hopper, four cubic foot pug mill mixer, Model 14 FB Briggs-Stratton air-cooled engine, high pressure kerosene heating system and hot material pan; all weighing approximately 1100 pounds and designed to hang on the tail gate of a dump truck. Discharge gate is watertight and bearings are sealed to permit the mixing of sand and emulsion. This unit will be assigned to an asphalt repair crew during cold weather and to a sealing crew at other times.

The asphalt spreader is a Model 202 R 8-foot Rola Paver. This unit is a modified spreader box with rear skirt that can be adjusted to control thickness of course being laid. It was anticipated that this spreader would be used for resurfacing narrow streets, intersections and other small jobs. However, it appears it will supplant the mechanical spreader in many cases.

The pneumatic tired roller is a Ferguson Model SP 10 conventional nine wheel, self propelled. This roller will be used to assure satisfactory compaction of thin courses of asphaltic mixtures where irregularities in pavement being resurfaced would cause a steel tired roller to "bridge".

MUNICIPAL ASPHALT PLANT

The Municipal Asphalt Plant continued to function satisfactorily and, during the year, produced 49,824 tons of asphaltic mixtures. Production goal was 50,000 tons.

Increased familiarity with the plant has permitted a slight reduction in the operating crew which has now been "standardized" as follows:

1 Foreman	Plant supervision
1 Dryer-mixerman	Mixer operation
1 Dryer-mixerman	Dryer operation and control
1 Dryer-mixerman	Aggregate feed control
1 Asphalt Finisher	Aggregate bunkerage, general aide

During periods of high production, about 120 days per year, one laborer is assigned to assist in unloading and bunkering aggregate.

Plant breakdowns did not affect production, nor were they serious.

On December 20, 1957, the storage bunker loading elevator belt broke. Repairs were made and the elevator made operable on December 26, 1957.

On January 8, 1958, the storage bunker loading elevator drive motor failed. Stripped gears were replaced, new bearings installed and the unit put into operation January 13, 1958.

In both of the above cases, bunkers held sufficient materials to permit continuance of normal operations.

In May 1958, several minor installations were made to comply with State safety regulations.

Normal maintenance and repair was performed during periods of low production or on Saturdays; the latter amounted to approximately six days for five men. Also, during periods of high production, the crew was allowed one half hour per day overtime for greasing, etc.

Mixtures produced, and their composition, were as follows:

				COMPOSITION - %		
Mix Designation	Tons	Asphalt	#6	5/16"	5/8"	1-1/4"
Surface	3497	8-1/2	91-1/2			
School	5144	7	60	33		
Topeka	24746	6	45	24	24	
Spreader	15602	5-1/2	40	25	13-1/2	12
Binder	762	3-1/2	21	28	22-1/2	25
Cold	73	6 *	35-1/2	27	30-1/2	
TOTAL	49824					

*Fuel Oil, Pacific Specification 300.

Aggregates were screened into the four "hot" bins from a combination of Antioch sand, coarse graded sand and three sizes of gravel. Asphalt used was 50-60 penetration, paving grade.

Production costs for the 49,824 tons produced during the year were as follows:

Direct Labor	$ 37,737	or	$ 0.76	per	ton
Indirect Labor	1,722	"	.03	"	"
Overhead	8,806	"	.18	"	"
Materials	187,030	"	3.75	"	"
Gas, Electricity, etc.	14,638	"	.30	"	"
TOTAL	$249,933	or	$ 5.02	per	ton

WORK PERFORMED

Work performed on Major and Secondary streets during 1957-58 included the following major and more interesting functions:

	Unit	Quantity	Total Cost	Unit Cost
Asphalt Resurfacing, Hand				
Asphalt Paving	Sq. Ft.	70,847	$ 8,314	$ .117
	Ton	534		15.57
Reset Casting	Each	4	189	47.25
Total	Sq. Ft.	70,847	$ 8,503	.12
(132.7 Sq. Ft. per ton)	Ton	534		15.92
Asphalt Resurfacing, Machine				
Asphalt Paving	Sq. Ft.	5,088,036	$281,576	$ .055
	Ton	35,513		7.93
Reset Castings	Each	266	12,966	48.74
Total	Sq. Ft.	5,088,036	$294,542	.058
(143.3 Sq. Ft. per ton)	Ton	35,513		8.29
Asphalt Patching				
Compressor Work	Sq. Ft.	311,312	$ 30,791	$ .099
Asphalt Paving	Sq. Ft.	1,086,158	269,369	.248
	Ton	9,753		27.62
Cleanup			61,105	
Total	Sq. Ft.	1,086,158	$361,265	.333
	Ton	9,753		37.04

	Unit	Quantity	Total Cost	Unit Cost
Curb Reset and Replaced				
Compressor Work	Lin. Ft.	26,189	$ 23,881	$ .912
Granite, Reset	Lin. Ft.	13,653	14,475	1.060
Replaced	Lin. Ft.	1,623	4,289	2.643
Concrete, Reset	Lin. Ft.	9,337	9,245	.990
Replaced	Lin. Ft.	714	2,465	3.452
Pavement, Asphalt	Sq. Ft.	18,394	14,347	.780
Concrete	Sq. Ft.	697	905	1.298
Sidwalk	Sq. Ft.	33,684	43,495	1.291
Cleanup	Lin. Ft.	25,327	40,919	1.616
Total	Lin. Ft.	25,327	$154,021	6.081
Concrete Curb Repair			$ 10,568	
Curb Yard				
Redress Granite Curb	Lin. Ft.	5,636	$ 11,852	$ 2.10
Sort, Move, etc.			5,279	
Total			$ 17,131	
Crack Sealing				
Sealing	Lin. Ft.	2,050,839	$122,470	$ .060
Cut and Fill			144	
Cleanup			30,304	
Total		2,050,839	$152,918	$ .075
Surface Sealing	Sq. Ft.	32,400	$ 4,123	$ .127
Manhole Casting Reset	Each	48	$ 2,037	$42.44
Concrete Pavement Repaired	Sq. Ft.	2,233	$ 6,383	$ 2.87
Sidewalk Reconstructed	Sq. Ft.	16,064	$ 29,230	$ 1.82
Traffic Stripes .Removed				
Burn	Lin. Ft.	29,632	$ 6,701	$ .226
Sandblast	Lin. Ft.	200	109	.545
Total	Lin. Ft.	29,832	$ 6,810	$ .228
Mud-Jacking			$ 20,848	
Heater Planing	Lin. Ft.	147,976	$ 19,239	$ .130
Slide and Debris Cleanup			$ 28,791	

Work on State Highways accounted for an expenditure of $17,062. Work involved 3,282 square feet of asphalt pavement repair, 771 square feet of concrete pavement repair, the removal of 380 lineal feet of traffic stripes and extensive heater-planing.

Work for other Bureaus and Departments accounted for an expenditure of $69,914. Work involved repaving 22,044 square feet where trenches had been opened for the installation or repair of sidesewers, the resurfacing or repair of 116,103 square feet of asphaltic pavement and the repair of 2,839 square feet of concrete pavement.

RESURFACING

The Bureau of Street Repair resurfaced approximately twenty-five miles of streets during the year. Work was performed at 248 locations and accomplished in 121 working days.

The advent of the pneumatic tired roller has permitted the placing of a thinner blanket, thus saving both time and material. The thinner blanket requires a finer mixture; hence, "Topeka Mix" has been substituted for the "Spreader Mix" described in report for year ending June 30, 1955. (See also, table of "Mixtures and Their Composition" under Municipal Asphalt Plant.)

Except as noted above, resurfacing was pursued as previously reported.

BRIDGES

Maintenance and operation of the City's three lift bridges continued as previously reported. There were no failures or mishaps of consequence.

Bridge openings during the past five years were as follows:

	Third Street	Fourth Street	Islais Creek
1957–58	1322	909	1492
1956–57	1185	629	1453
1955–56	800	290	1338
1954–55	950	372	1318
1953–54	796	306	1504

The increase in the number of openings of the Third Street and Fourth Street bridges can be attributed to the passing of a sightseeing launch to and from its berth, a practice begun during the previous year.

Openings of the Islais Creek Bridge included 305 for dredging purposes. During the previous year 334 openings were made because of dredging operations.

TUNNEL

Maintenance and operation of the Broadway Tunnel continued to be as previously described.

Tunnel ventilation is of major interest; its description warrants repetition from time to time. The description set forth in report for year ending June 30, 1953, first year of operation, is still fitting and is herewith repeated with minor change in the paragraph describing the general patterns of the carbon monoxide analyzer recordings.

The Broadway Tunnel consists of two parallel tunnels, each 1616 feet long, generally referred to as the north bore and the south bore. The north bore accommodates two lanes of west bound traffic and the south bore accommodates two lanes of east bound traffic. There is a sidewalk for pedestrians in each bore.

North bore ventilation is provided by two blowers, housed at the east end, capable of delivering a total of 300,000 cubic feet of air per minute; south bore ventilation is provided by two blowers capable of delivering a total of 106,000 cubic feet of air per minute. Though the two systems are independent of each other, they are controlled from a central station located in the east ventilation building.

Air is continuously drawn from two locations in each bore and analyzed automatically. Blowers are normally automatically controlled and operated at various combinations of speed and number according to the concentration of carbon monoxide being recorded. The 'concentration' is referred to as the number of parts of carbon monoxide in 10,000 parts of air. One blower goes into operation at slow speed when the concentration reaches '1'. If the tunnel air is not cleared within a predetermined time, presently set at seven minutes, the second blower goes into operation at slow speed. A concentration of '4' is considered the danger point. If this degree of concentration should occur, not only would both blowers continue to operate at fast speed but a signal would be sounded and traffic controls automatically set to prevent traffic from entering the tunnel.

Carbon monoxide concentrations are noticeably affected by wind direction and velocity. The prevailing westerly wind tends to clear the south bore, where it works with the traffic and the blowers. In the north bore the wind works against the traffic and blowers with tendency to intensify the concentration. Chart recordings show that when the concentration is highest in the north bore, it is usually very low in the south.

Records show that blowers at the east end operated a total of 281.3 hours at slow speed and 10 hours at fast speed during the past year. At the west end, during the same period, the blowers operated 37.7 hours at slow speed and 23.6 hours at fast speed.

Equivalent time percentages are approximately; north bore, 3.21% at slow speed and .11% at fast speed; south bore, .43% at slow speed and .27% at fast speed. The major portion of these times is on account of opposing afternoon winds in the north bore and heavy morning rush hour traffic in the south bore.

The general patterns of the north bore analyzer recordings show that carbon monoxide concentration is nil until 7 a.m., rises to '.5' at 8 a.m. recedes to '0' at 10 a.m., rises to '.5' at 4:30 p.m. and recedes to nil at 9 p.m. In the south bore it is nil until 5:30 a.m., rises to '1' at 8:15 a.m., recedes to '.5' at 9 a.m., fluctuates between '.5' and '0' until 5 p.m., rises to '1' at 6 p.m. and recedes irregularly to nil at midnight. All patterns fluctuate considerably; Friday patterns show slightly greater concentrations of longer duration during the morning and evening rush hours.

Hours of operation of the various ventilating blowers, with similar information for 1956-1957 shown in parentheses were as follows:

	SLOW SPEED			FAST SPEED		
	Hours		Percent of Time	Hours		Percent of Time
No. 1, North Bore - Westbound Traffic	(160.3)	145.8	1.66	(4.1)	4.5	.05
No. 2 North Bore - Westbound Traffic	(161.0)	135.5	1.55	(3.7)	5.5	.06
TOTAL	(321.3)	281.3	3.21	(7.8)	10.0	.11
No. 3, South Bore Eastbound Traffic	(18.3)	18.9	.22	(14.3)	10.0	.11
No. 4, South Bore Eastbound Traffic	(18.9)	18.8	.21	(12.0)	13.6	.16
TOTAL	(37.2)	37.7	.43	(26.3)	23.6	.27

No traffic count was made during the year; however, previous and subsequent counts were as follows:

	Eastbound	Westbound
Wednesday, February 11, 1953	8,668	8,760
Monday, August 17, 1953	9,361	8,878
Wednesday, March 16, 1955	10,607	9,795
Thursday, July 10, 1958	11,144	9,478

Tunnel relamping on five occasions replaced a total of 671 burned out lamps.

The Bureau of Street Cleaning continued to keep the tunnel in its acceptably clean condition.

NEW PAVER USED FOR SMALL RESURFACE WORK

APPLYING SLURRY COAT TO ERODED SURFACE OF PAVEMENT

BUREAU OF STREET CLEANING

B. M. Crotty, Superintendent
Street and Tree Division

The Bureau of Street Cleaning responsibilities include the cleaning of 820 miles of improved City streets and the upkeep of certain street-side trees, shrubs and ground-cover. The improved street system includes 1640 curb-miles along sidewalks and 87 curb-miles along traffic-dividing strips. For this service the Bureau had 361 employees and 73 motorized units. Total gross expenditure for the year was $2,266,711.

Increased traffic, increased speed of travel, and increased day and night street parking are bringing about street cleaning problems in an ever accelerating number. In solving these problems, determined attempts are made to hold expenditures to a minimum consistent with efficient operation.

Keeping a City as large as San Francisco in a clean condition is a considerable task. In order to attain any measure of success it is necessary to consistently promote educational campaigns to stimulate public awareness of personal responsibilities toward preventing carelessly strewn litter.

A standard for cleanliness is difficult to define as there is no known practical way to measure either dirtiness or cleanliness. Without an adequate measure, a suitable degree of cleanliness can only be determined by alert observation, the extent and nature of complaints from citizens and other expressed public opinions.

The Bureau is experiencing substantial difficulty in coping with the increasing necessity of picking up litter and garbage carelessly and indiscriminately discarded on our public thoroughfares. Street refuse, commonly in evidence on our streets, may generally be divided between: (1) natural and therefore unavoidable dirt, such as that caused by the wear of pavements and tires; dust from the air; and leaves and branches from trees; and (2) refuse caused by carelessness and therefore avoidable, such as paper and other litter discarded by pedestrians; droppings from overloaded or defective truck bodies; sweepings from sidewalks and buildings; and the clandestine disposal of garbage. The annual cost of picking up all this avoidable refuse has been estimated to amount to about $375,000. It is this time consuming and costly effort that we seek to reduce by all possible means at our disposal.

In order to provide needed services toward reducing this costly expenditure for picking up avoidable litter, the Bureau has over past years requested, without success, the full-time assignment of a police officer with car and an assistant superintendent so as to promote a continuing program for keeping our City clean.

Until such assignments are provided, the Bureau can only make spasmodic attempts toward preventive means to correct the unfavorable litter situation.

The Bureau regrets the loss, by death during the year, of two valued and experienced supervisors: Mr. Stephen J. Sullivan, Superintendent, and Mr. Per Peterson, District Director. In the interim period between Mr. Sullivan's demise on September 29, 1957 and Mr. Crotty's appointment on May 19, 1958, the responsibilities of the office of Superintendent were capably administered by Mr. Francis Dunne.

TRAINING CREW

A program for training new employees was started during the year. Upon first reporting for work, the new employee is assigned to a Sub-Foreman of a special crew for purposes of instruction and practical experience in field work under actual operating conditions. The training period is from 4 to 6 weeks and upon completion of the course, the trainee is given a permanent job assignment providing his probationary service has been satisfactory.

BLOCKMEN

The Bureau had 134 blockmen assigned to hand sweeping in the business and adjacent residential areas where parking is dense and generally continual. These blockmen work on foot and have small carts for collecting their hand broom sweepings. Block routes vary between one-half and four curb-miles in length, depending upon prevailing conditions. The total length of all block routes is 550 curb-miles. The routes in the downtown area are of shorter length and are necessarily patrolled as many as four times daily. The routes in the less travelled streets of outlying commercial sections are longer and are serviced once daily or less frequently. A total of 83,000 curb-miles were serviced during the year, or a total average of 620 curb-miles per blockman.

GANG-SWEEPING

Ten Gang-Sweeping Crews are assigned to service noncommercial areas not patrolled by blockmen. Records for the year are summarized in Table 1. Each gang is under supervision of a Labor Sub-Foreman and is composed of 4 to 6 hand sweepers and a truck crew of one chauffeur and 2 laborers.

A total of 39,000 curb-miles were serviced during the year. Gang-sweeping routes vary between 66 and 270 curb-miles in length which provide sweeping-frequencies in the various districts varying generally between 5 to 25 days. The total length of all gang routes is 1090 curb-miles.

MOTOR-SWEEPING

Eleven motor-sweepers are in service in the Bureau; 3 Elgins, 5 Waynes and 3 Austin-Westerns. Bin capacities of these sweepers vary between 2 and 4 cubic yards. Motor-sweeping records for the past year are shown on Table 2. Typical sweeping conditions and performance results for the year, are summarized as follows:

(a) Sweeping-machine routes are scheduled to mostly start from the garage door and finish the day's work at the garage so as to reduce "deadheading" or unproductive service.

(b) Motor-sweepers empty their refuse bins in the vicinity of route for later pickup and haul to dumps. On an average, sweepers empty bins about twice a day. Each stop consumes about 12 minutes. When all sweepers are working it requires 1 truck with crew of 3 men for 3 hours and one overhead loader with a crew of 2 men for 8 hours to haul a total daily average of about 35 cubic yards of debris to the dump grounds for final disposal.

(c) Most satisfactory sweeping speeds vary between 3 and 6 m.p.h., depending on conditions involved such as traffic-density and topography.

(d) Sweepers refill water tanks on an average of about 4 times a day; consuming about 8 to 18 minutes for each such operation.

(e) An average of about one hour per day per sweeper is consumed in routine sweeper maintenance and about one hour in traffic stops.

(f) Sweepers, in operation during the year, averaged about 124 miles per day or an average of about 22 miles per sweeper per day.

MACHINE-FLUSHING

Nine motor flushers are used for flushing the pavements with water in the main business and adjacent residential areas of the City. The objective in flushing is to wash the pavement and concurrently to force dirt and waste materials to the gutter where it can be readily collected by motor sweepers or hand sweepers. Motor-flushing records for the year are summarized on Table 3.

Flushing has proven an economical means to supplement our street cleaning. It eliminates oil spots and other residues from the pavement which are potential hazards to pedestrian and vehicle alike and produces a sanitary effect to the water treated street surfaces. Citizens sometimes complain that the taxpayers' money is being wasted when flushers operate in the rain. However, experience shows that when the pavement has been soaked by rain, the oil slick is in a state of flotation, debris has been loosened, and the flushers more easily complete the cleaning job.

The flushers operate between 7:00 A.M. and 4:00 P.M., Mondays through Fridays. Two of the flushers are used between 6:00 A.M. and 10:00 A.M. on Saturdays and one flusher is used between 6:00 A.M. and 10:00 A.M. on Sunday. Varying numbers of flushers are also used after special celebration events. Except for about 5 percent of their operational use on special work such as for cleaning the walls and pavements of Broadway Tunnel (shown by accompanying photograph and cleaning schedule) and spillages from trucks, the equipment is used for flushing pavements on regularly scheduled routes.

Flushers normally operate in the traffic lane next to the car parking strip, at travel speeds of 8 to 10 miles an hour. Flushing water is generally applied to street surfaces through 2 nozzles at varying safe pressures. One of the nozzles is at the front left side of the vehicle and the other nozzle is on the right side near the rear of the cab. The flushing water is directed toward the gutterways at controlled pressures ranging between 20 p.s.i. and 40 p.s.i. In this operation an area for about 26 feet from the curb is cleaned. Nozzles discharge an average of about one gallon of water in a little less than 4' of travel. The motor flushers are equipped with a third nozzle on the left side of truck, near the rear of cab, which is also used on special occasions such as on one-way streets and streets having dividing strips. In order to avoid traffic hazards at intersections the cross-street is not normally flushed, except that in wet weather cross-walks are sometimes flushed to remove oil scum deposits.

LITTER CONTROL

Litter control is handled by ten litter control crews who cover the whole City on assigned routes, and one litter patrol that covers special assignments of urgent nature.

Each litter control crew includes a driver and two laborers with an 11-3/4 cubic yard truck. Their routine job is to pick up litter that collects in paper pockets on vacant lots and against hillsides which are not reached by flushers, sweepers and the regular blockmen. The men work with shovel and broom, loading into closed, side-door truck bodies. Litter crewmen are instructed not to work beyond the street curb, except to collect papers which could blow onto street areas.

The one-man litter patrol panel truck is equipped with a two-way radio-phone. It is sent on emergency assignments such as accidents involving auto-wrecks, broken glass, barricade needs, oil or other spillage. It is also assigned to answer emergency calls on Sundays from 1:00 p.m. to 5:00 p.m.

The ten litter control trucks and the one litter patrol truck typically travel about 350 miles a day. Loads are hauled to tideland dump sites.

COLLECTION

The Bureau has 6 trucks assigned to the task of emptying street waste receptacles used by the Blockmen for depositing street sweepings.

On May 30, 1958, the Bureau placed into service a new "Gar Wood Load Packer" which is shown on an accompanying photograph. This unit has a hydraulically operated compression unit mounted on the rear of truck and is capable of transporting 20 cubic yards of highly compressed waste. This type of unit was purchased to gain greater load capacity with resulting reduction in number of necessary dump trips.

UTILITY CREWS

There are 4 crews on utility assignments, as follows:

1. One crew, consisting of a chauffeur and 2 laborers with an 11-3/4 cubic yard truck, does miscellaneous work throughout the City, such as removal of truck spillage and other work of an emergency nature.

2. One crew, consisting of a chauffeur and 2 laborers with an 11-3/4 cubic yard truck, is used to remove weed growth from public thoroughfares and certain vacant lots, remove waste from containers at the Maintenance Yard and the Purchaser's Shop #2, and to respond to such emergencies as are directed from the office.

3. One crew, consisting of a chauffeur and 2 laborers with an 11-3/4 cubic yard truck, has a daily assignment to remove refuse in the Produce District and to assist other litter control trucks which are temporarily out of service or have an abnormal amount of work.

4. One crew, consisting of a chauffeur, and a laborer with a truck equipped for front-end loading is used primarily to collect debris from motor sweepers; to remove large deposits of soil on the street from washouts and slides, and for other cleanup jobs.

WASTE DISPOSAL SITES

Prior to the organization of the Bay Area Pollution Control District, waste materials collected from public thoroughfares were dumped on tidelands at the northerly end of Jennings Street. Some of the combustible materials were then burned during times of favorable weather conditions. All dumpings were progressively covered over with clean fill.

Subsequent to the Districts' ban on open burning, October 1, 1957, it became necessary to haul wastes containing combustible material to the Garbage Disposal Site on San Francisco Bay Tidelands, just south of the San Francisco City & County Line. The change in dump location requires additional annual haulages of 23,000 truck miles, estimated to cost $27,800.

CLEANING OF TUNNELS

The wall surfaces and pavements of Stockton Street Tunnel and Broadway Tunnel are cleaned on scheduled days and, in addition, special cleanings are made when necessary to maintain standards of appearance.

THE STOCKTON STREET TUNNEL has a roadway width of 36 feet and a length of 905 feet. There is a 7 foot sidewalk on each side of the roadway. The tunnel has a wainscotting 8 feet high of glazed tile and an arch of smooth concrete finish. Efflorescence deposits, caused by ground water leakage, have been difficult to remove and have resulted in considerable stains to the finished wall surfaces.

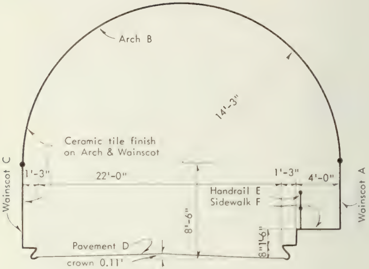
This tunnel is cleaned on a schedule as follows: sidewalks are flushed twice weekly, and the tile section of the walls are scrubbed 3 times a year, using water and detergent applied with brushes.

THE BROADWAY TUNNEL has a total length of 2527 feet. The major dimensions of the tunnel and the normal cleaning schedule is shown on Figure I. Tunnel walls are surfaced with glazed tile to the spring line of the arch and with unglazed tile above.

Since opening the tunnel to traffic on Dec. 21, 1952 various means of cleaning have been tried by the Bureau for the purpose of setting up an efficient cleaning schedule. Trial experiments have included various types of detergents, cleaning equipment and operation techniques. Our present schedule of cleaning and the methods employed in cleaning appear to be giving good results.

The tunnel is cleaned, in part or all, 52 times a year on a scheduled weekly, quarterly and semi-annual basis. The quarterly and semi-annual cleanings coincide with the weekly schedules.

Length	
(a) Approaches	911'
(b) Vent. Bldgs.	251'
(c) Tunnel	1365'
Total	2527'



CROSS SECTION OF TUBE

Each of the twin tubes is Identical

NORMAL CLEANING SCHEDULE

(a)	Weekly	-	Wash down Sections A, B (except upper one-third of Arch), C, D, E, and F using 2 flushers. Time required about 4 hours each tube.
(b)	Quarterly	-	When conditions require, wash with detergent and water; follow up with fresh water using 2 flushers. Time required about 8 hours each tube. Dry clean Sections A, F, and E with hair brushes.
(c)	Semi-Annual	-	Clean Sections A, B, C, E and F using new spray attachment on motor flushers and repeat quarterly operation. Time required about 20 hours each tube using 3 flushers.

FIGURE I

BROADWAY TUNNEL CLEANING SCHEDULE

In our present weekly cleaning schedule, use is made of two motorized flushers are with special detergent spray equipment and the other with a special rinse attachment. An additional motorized flusher without the special equipment is used for semi-annual cleanings. One of the motor flushers has a specially shaped and mounted attachment consisting of galvanized steel pipe fitted with numerous spraying nozzles. The spray of each nozzle overlaps the spray of the adjacent nozzle, preventing blank areas. The spray is water and detergent mixture. The flusher which has the spray attachment proceeds first into the tunnel and travels at a slow speed, allowing the scouring action of the spray to help loosen the scum. This detergent spray is permitted to settle and is then rinsed off by the second flusher which has been following at a distance of 150' to 200'.

During the semi-annual cleaning, use is made of a third flusher to augment the work of the rinse truck. The use of this third flusher is necessary to allow staggered loading of water tanks for maintaining cleaning work without interruption.

PREVENTIVE STREET CLEANING

A preventive street cleaning program is of primary importance toward reducing the excessive costs of collecting litter which is carelessly thrown on the streets. Often this careless disposal of litter by thoughtless people occurs soon after our street cleaning forces have serviced the area. Unfortunately, full emphasis cannot be given this preventive program without augmentation of personnel. It has been our objective that this program include:

(a) Cooperation with schools, public-spirited organizations and improvement associations toward waging a continuous campaign of keeping our streets clean.

(b) Assignment to this bureau of one police officer.

(c) Addition of an Assistant Superintendent to be a prime-mover in the program and to develop programs for attaining greater efficiency in operations.

A recent change has been made in the Preventive Cleaning program. Since its inception in 1954 a Committee of citizens has been making monthly tours of San Francisco's districts and evaluating the cleanliness of these districts. This Committee has recently turned this project over to the Student Driver Program conducted by the San Francisco Public High Schools. These Student Drivers drive daily in every district of the City and accordingly are in a position to assume the judging of the cleanliness of each district. The first tour conducted in this way was completed during the last week of the school year of 1958.

STREETSIDE PLANTING

The Street Tree Division completed its third year of operation since its organization on July 1, 1955. This division was formed as a result of the passage of Ordinance 8993 which transferred the maintenance of streetside planting from the Park Department to the Department of Public Works. Among other things, the ordinance stipulates that this Department shall:

(a) Develop and establish an Official Street and Sidewalk Planting Program and to propose modifications of same when desirable.

(b) Plant, maintain, or remove trees, shrubs, or ground cover in street areas in accordance with the program.

(c) Request budget funds adequate for maintenance of an orderly planting program.

(d) Encourage proper planting and maintenance of trees by private persons.

Ruling objectives of the new program are beauty, safety and economy. Toward fulfilling these purposes, attention is directed toward attaining aesthetic effects by use of slow-growing, disease resistant and colorful trees; avoidance of plantings that may cause injuries to persons or damage to property; and selectivity in choice of trees and location with consideration given to minimizing maintenance costs.

The ordinance requires that a property owner obtain a permit from this department to plant, maintain or remove a tree along a street sidewalk area. Residents, seeking information, are advised as to suitable types of trees for specific locations. The Tree Division issues guidance pamphlets listing tree species, their characteristics, exposure preferences, and street locations where good examples of growth may be viewed.

Experiments are being made with various species of trees to determine the most suitable types for the varied climatic zones of this City. To insure uniformity of growth and habit, trees from clonal propagation (i.e., grafting, budding, root cuttings, etc.), rather than seedlings, are sometimes purchased from tree specialists, such as the Saratoga Horticultural Foundation in the San Francisco Bay Area.

TABLE I
BUREAU OF STREET CLEANING
GANG-SWEEPING DURING FISCAL YEAR 1957-58

Month	SWEEPING-FREQUENCIES FOR GANG ROUTE NUMBERED:											TOTAL
	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	
1957 July	5	3	5	1	2	2	2	1	2	4	Started Jan. 1958	27
August	4	3	4	1	1	3	1	1	1	5		24
September	5	3	5	0	2	1	1	1	2	5		25
October	4	3	4	1	3	2	2	1	2	4		26
November	4	3	4	1	2	2	2	2	2	6		28
December	5	3	5	1	2	3	3	1	2	4		29
1958 January	4	4	4	1	3	3	3	2	2	6	2	34
February	4	5	4	2	2	2	3	2	2	4	2	32
March	5	5	5	2	3	3	4	2	3	5	2	39
April	4	4	4	2	3	2	2	1	2	4	2	30
May	4	3	4	1	2	3	3	2	2	4	2	30
June	5	3	5	2	3	2	2	1	2	5	2	32
TOTALS	53	42	53	15	28	28	28	17	24	56	12	356

NOTE: Each gang is under supervision of a Labor Sub-Foreman and is composed of 4 to 6 hand-sweepers with a truck crew of 1 chauffeur and 2 laborers. Length of each route varies from 66 to 270 curb-miles.

TABLE 2

BUREAU OF STREET CLEANING

MOTOR-SWEEPING FOR FISCAL YEAR 1957-58

Month	Curb-Miles Swept	Sweeper Loads (Number)	DISPOSITION OF 11 SWEEPERS (Hours)			Downtime* (Percentage)	Average Number of Sweepers in Operation
			Sweeping	Downtime*	Total Work-Day Hours		
1957							
July	3,329	343	954	534	1488	— 35.89	7.1
August	3,067	295	459	1033	1492	69.24	3.4
September	3,153	308	1,141	323	1464	22.06	8.6
October	2,811	250	864	872	1736	50.23	5.5
November	2,516	314	552	972	1524	63.78	4.0
December	3,010	271	758	850	1608	52.86	5.2
1958							
January	3,335	283	1,101	707.5	1808.5	39.12	6.7
February	2,755	222	970	838	1808	46.35	5.9
March	3,289	256	1,122	794	1916	41.44	6.4
April	3,603	294	1,217.5	774.5	1992	38.88	6.1
May	3,727	324	1,207.5	724.5	1932	37.50	6.3
June	3,443	338	416	722.5	1138.5	63.46	4.0
Total for Year	38,038	3,498	10,761	9145	19907	--	-
Average per Month	3,169	291	897	762	1658	46.73	5.75

NOTE: *Downtime includes all work-day time that equipment is not engaged in actual street-sweeping; such as when undergoing repairs, held for servicing or for standby.

TABLE 3

BUREAU OF STREET CLEANING

MOTOR-FLUSHING FOR FISCAL YEAR 1957-58

Month	Curb-Miles Flushed	Number of Stops for Refilling Water Tanks	DISPOSITION OF 9 FLUSHERS (Hours)			Downtime* (Percentage)	Average Number of Flushers in Operation
			Flushing	Downtime*	Total Work-Day Hours		
1957							
July	5,302	3,222	1,096	360	1456	24.72	6.8
August	5,416	3,386	1,061	403	1464	27.53	6.5
September	4,376	2,788	712	404	1116	36.20	5.7
October	5,363	3,260	1,045	475	1520	31.25	6.2
November	5,076	3,027	812	364	1176	30.95	6.2
December	4,988	3,080	1,059	337	1396	24.14	6.1
1958							
January	5,624	3,421	1,221	391	1612	24.25	7.6
February	5,205	3,093	1,093	359	1452	24.72	6.7
March	5,220	3,141	1,133	411	1544	26.60	7.3
April	5,445	3,390	1,205	408	1613	25.28	7.4
May	5,582	3,337	1,181	371	1552	23.90	8.5
June	4,677	3,279	1,014	309	1323	23.23	6.0
Total for Year	62,274	38,424	12,632	4,592	17,224	--	-
Average per Month	5,189.5	3,202	1,052.75	382.75	1435.33	2.55	6.7

NOTE: Each flusher is operated with 1 Chauffeur and 1 Laborer for handling flushing controls.

*Downtime includes all work-day time that equipment is not engaged in street flushing; such as when undergoing repairs, held for servicing, or standby or when operating on work of different nature.

LITTER PATROL TRUCK, EQUIPPED WITH RADIO PHONE, QUICKLY RESPONDS FOR EMERGENCY CLEANUPS

2500 GAL. FLUSHER IS USED TO CLEAN STREET SURFACES. SPECIAL EQUIPMENT IS ADDED TO IT PERIODICALLY FOR CLEANING BROADWAY TUNNEL

WOOD CHIPPER REDUCES TREES & BRANCHES, UP TO 4" DIA., TO A USABLE MULCH

BUREAU OF BUILDING REPAIR

A. H. Ekenberg, Superintendent

As the name implies, this Bureau is a service division of the Maintenance and Operation activities of the Department of Public Works which deals primarily with public buildings. In the scope of its responsibilities, therefore, it must budget for and provide the maintenance and repair services for 314 City and County buildings which are the responsibility of the Department, and which have been so established and determined by custom, rulings of previous years, and by Charter authority.

In addition to the above primary function, the following responsibilities and duties may be considered secondary Bureau activities:

1. Provide operating and custodial personnel and supplies for 31 of the above buildings, requiring the full-time services of 119 employees.
2. Repair and maintain other City buildings by Work Order procedure, on an interdepartmental basis. The major portion of this work is derived from the Board of Education, while other City departments account for a lesser amount, as graphically shown in Figure 1.
3. Budget for and provide labor, materials, supplies and contractual services for street traffic painting. The units of work performed and the unit costs thereof are shown on Table A.
4. Provide inspection and survey services necessary for the development of a preventive maintenance program, and the compilation of data and material for the intelligent preparation of budgets. In addition, providing technical consultation and assistance to the operating activities in the appropriate maintenance and repair of properties.
5. Maintenance and repair of street name signs.
6. Repair of street structures and sidewalks fronting on City property, and of various monuments in street areas.

PERSONNEL

On February 1, 1958, Walter C. Zecher retired as Superintendent after 32 years of faithful service, all dedicated to the constant improvement of the Bureau, its personnel, procedure, and plant. The results of his efforts, of his predecessors in office, and of the countless unheralded men of every rank and craft in this great organization for these many years speak eloquently for themselves.

The organization chart included as a part of this report indicates the primary divisions within the Bureau, and their function as regards maintenance and repair, and maintenance and operation, in addition to the technical and engineering division providing survey and inspection services.

MAINTENANCE AND REPAIR

As will be noted, the maintenance and repair division consists of nine separate shops, with the following tabulation giving the number of employees, classifications, and assignments for the various categories. Assignments to specific buildings are not inflexible and are subject to call as necessary when the need is urgent elsewhere. Also, the majority of employments are enumerated as interdepartmental, and are not established as continuing positions, but only "as needed" when the services are required and the funds are provided. The major portion of these interdepartmental employments have been derived from school funds during preceding years.

PAINT SHOP

Budgeted		Interdepartmental
1	General Foreman	-
4	Working Foreman	2
30	Painters	19
35		21

Total = 56

Usual assignments of the budgeted employments are as follows:

3 Working Foremen - Street Traffic Painting

1 -Do - San Francisco Hospital and Laguna Honda Home
18 Painters - Street Traffic Painting
4 -Do - San Francisco Hospital
4 -Do - Laguna Honda Home
1 -Do - City Hall
2 -Do - Sewage Treatment Plants
1 -Do - As needed in City Buildings

PLUMBING SHOP

Budgeted		Interdepartmental
1	General Foreman	-
10	Plumbers	17
11		17

Total = 28

Usual assignments of budgeted employments:

3 Plumbers	- San Francisco Hospital
2 -Do	- Laguna Honda Home
1 -Do	- Firehouses & Police Stations
1 -Do	- City Hall
.5 -Do	- County Jail #2 & #4
1.5 -Do	- As needed, City Buildings
1 -Do	- Hall of Justice

STEAMFITTING SHOP

Budgeted		Interdepartmental
1	General Foreman	-
7	Steamfitters	8
8		8

Total = 16

Usual assignments of budgeted employments:

3 Steamfitters	- San Francisco Hospital
1 -Do	- Laguna Honda Home
1 -Do	- City Hall
1 -Do	- Hall of Justice
1 -Do	- Fire Houses & Police Stations

GLAZING SHOP

Budgeted		Interdepartmental
1	Foreman	-
1	Glaziers	4
2		4

Total = 6

Usual assignment of budgeted employment is to various City Buildings as needed.

LOCKSMITH SHOP

Budgeted		Interdepartmental
1	Foreman	-
-	Locksmiths	9
1		9

Total = 10

ELECTRIC SHOP

Budgeted		Interdepartmental
1	General Foreman	-
-	Foreman	2
5	Electricians	15
-	Armature Winder	3
6		20

Total = 26

Usual assignments of budgeted employments:

1 Electrician - San Francisco Hospital
1 -Do - City Hall
1 -Do - Hall of Justice
1 -Do - Southeast Sewage Treatment Plant
1 -Do - North Point Sewage Treatment Plant

CARPENTER SHOP

Budgeted		Interdepartmental
1	General Foreman	-
-	Foremen	2
6	Carpenters	21
2	Laborers	-
1	Chauffeur	-
10		23

Total = 33

Usual assignments of budgeted employments:

2 Carpenters - San Francisco Hospital
1 -Do - Laguna Honda Home and Youth Guidance Center
1 -Do - Fire Houses and Police Stations
1 -Do - City Hall
1 -Do - Hall of Justice
2 Laborers - Truck duty, including delivery, pickup, etc., for all yard shops as needed.

SHEET METAL SHOP

Budgeted		Interdepartmental
1	General Foreman	-
1	Sheetmetal Workers	15
2		15

Total = 17

Usual assignment of budgeted employment is to various City Buildings as needed

CEMENT SHOP

Budgeted		Interdepartmental
1	General Foreman	-
1	Cement Finishers	13
-	Plasterers	3
-	Tile Setter	1
2		17

Total = 19

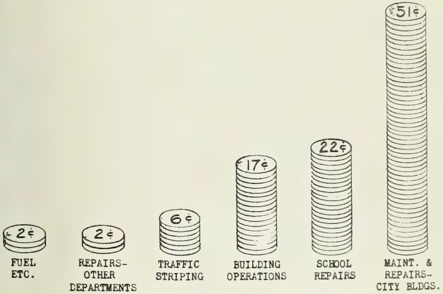
Usual assignment of the budgeted employment is to various City Buildings as needed.

MAINTENANCE AND OPERATION

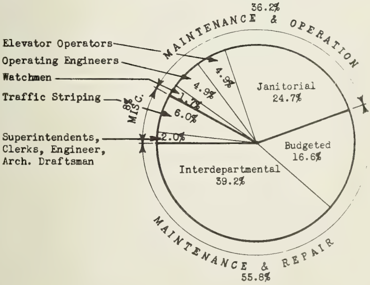
The maintenance and operation divisions fall naturally into two main sections, each dealing primarily with the custodial and operational aspects of building functions as differentiated from the shop divisions. In one group, the supervisor of janitors heads a staff composed of janitors and window cleaners, responsible for the cleanliness and sanitation of those buildings for which the Bureau provides complete custodial service, as listed in the annual report for 1955. In the other group, two chief operating engineers head an operational and custodial staff of operating engineers, elevator operators, and watchmen.

In the next annual report, it is intended that particular attention will be paid to these two vital but often overlooked functions, with special attention being directed to the development of specific programs for future years during the next twelve months. In the meantime, therefore, it is felt that the organization chart included herein indicates present relationships adequately.

BUREAU OF BUILDING REPAIR
FIGURE 1



HOW THE DOLLAR IS SPENT



ASSIGNMENT OF PERSONNEL

FACILITIES

In general, shop and storage spaces at the Maintenance Yard are excellent, including separate facilities for each of the nine maintenance and repair divisions of the Bureau. However, with the passage of time, the work load and added responsibilities of some divisions has now reached the point where increased working areas are a virtual necessity if economy and productivity are not to suffer. This need is most urgent in the motor and armature section of the Electric Shop, the Street Sign Section of the Cement Shop, and the Locksmith Shop in its entirety.

These problems are not, of course, limited only to this Bureau, but have become one of the major threats to increased efficiency in all operating Bureaus of the Yard. As a result, considerable time and study have been expended by the Department as a whole in their study and have resulted in the development of plans for general Yard expansion and improvement, currently proposed as a bond issue to be voted upon in November of 1958. Passage of this measure, it is felt, would result not only in immediate measurable gains, but would allow for even greater improvements in operating efficiencies in future years.

VEHICLES AND PORTABLE EQUIPMENT

In line with long established policy the Bureau was able once again this year to reduce the total of rented vehicles to the present number of 6 pickups, and enlarge the number of City-owned trucks to 46. The gradual increase in the number of specially equipped trucks for each particular craft has substantially increased operating efficiencies; rented trucks being generally unsuited or impossible to adapt properly to highly specialized activities without major changes in structure.

HANDICAPS TO EFFICIENT OPERATION

In addition to the problems common to all of the maintenance and operational bureaus, and covered in the report of June 30, 1957, other specific items are worth mentioning which also hinder efforts to achieve optimum operational efficiency.

As labor and material costs increase from year to year, budget appropriations, unfortunately, do not increase proportionately. In effect, then, a lesser amount can be done annually. At the present time, there is an accumulated backlog of deferred maintenance to be brought up-to-date, and which has been long postponed. In addition, there currently exists the necessity for the replacement, reconstruction, and modernization of worn out or outmoded facilities, as well as a modest requirement for expansion, if normal civic growth is to continue on a par with other major U.S. cities. Without realistic appropriation allowances these minimal objectives cannot be realized.

In addition, problems exist in the purchasing of materials and supplies, with delays in their acquisition being apparently the rule rather than the exception, a problem not particularly shared by private industry.

In order to regain the same work level as originally performed at the time the Charter limitation of $2000 was placed in effect, it will be necessary to increase this figure to an amount commensurate with prevailing conditions. At the present time, this limitation of $2000 acts to reduce our Bureau efficiency and handicap many operations.

It is felt also that lines of authority and responsibility for building maintenance and repair are presently generally loosely defined, without clear-cut lines of demarcation or logical establishment, and could probably be greatly improved should duties and responsibilities be carefully studied, re-arranged, and either consolidated or completely separated. For example, at Laguna Honda Home and at San Francisco Hospital, some of the building trades mechanics are budgeted to us and under our jurisdiction, while others are budgeted to the respective institution and responsible, therefore, to them, while the maintenance of both of these buildings is a Department of Public Works responsibility. The same is true of other facilities such as the Civic Auditorium, Libraries, etc.

SHOP HIGHLIGHTS

While each of the shops of the Bureau is worthy and deserving of equal praise and commendation, it is the intention in this and future annual reports to dwell a little more at length on some specific shop or shops until all have been covered in more or less detail. Since three of the present shops are at this time in particular need of improvement and expansion to increase operating efficiency, and are to be enlarged should the present pending yard expansion bond issue be passed in November of 1958, they have been selected for current review.

LOCK SHOP

The Locksmith Shop is the one shop activity which is not duplicated in any other Department of the City and County of San Francisco, being the sole agency of its type in civic government. In consequence, its activity and importance are considerable. During the past few years, over 11,000 keys have been cut annually, many of them involving extensive cylinder changes in master keying and grand master keying arrangements, including prison and cell locks. Security is the prime requisite of this operation, and one which has always been completely kept by these painstaking mechanics.

In addition to the obvious activity of the repair and maintenance of locks and keys, the shop does complete overhaul and repair of over 500 door closers and 300 floor checks annually, besides the work on all panic bars, safes (including, incidentally, occasional safe cracking on request) and related hardware of this type. Miscellaneous school requisitions alone, for the preceding year, totalled 1586, with school work orders totalling 660 man days in addition.

Since the shop floor area totals only 544 square feet, it is understandable why every square inch, and in fact, almost every cubic inch, of space has been utilized. Since the only storage area is located some distance away, it is readily seen why the need for expansion and improvement of these facilities is of prime importance.

Besides the above area, the pride of the shop are the two completely equipped 3/4 ton panel trucks, capable of performing almost any required activity at the job site. These trucks were planned and developed by the lockshop personnel, and equipped by other yard mechanics with all the necessary accessories. These include work benches, key and tool cabinets, parts cabinets and drawers, vises, grinders, buffers, key duplicating machines, and in addition, the usual necessary portable electric tools required for this activity. To handle this equipment, the trucks are equipped with small gas engine driven electric generators, which can, if necessary, be removed from the trucks for repairs or used as an emergency power source elsewhere.

CEMENT SHOP

While the major portion of the work of this shop is cement work, during the preceding years many new functions have gradually increased the scope of its activities, and its inter-departmental employments now include three plasterers and one tile setter in addition to the innumerable small items of building repair requiring masonry trades, such as caulking, waterproofing, repairs to parapet walls, and the like. Recently, the waterproofing of leaking Fire Department underground cisterns has become a relatively important section of their annual business, with gratifying success attending their efforts. For years, these leaking cisterns have been a continuing problem to the Fire Department and with the development of improved techniques and superior waterproofing compounds it now appears that a continuing program of maintenance and repair is of real value.

The development of the Street Sign division of the Cement Shop has been gradual but definite, and now comprises a substantial portion of the shop work program. It is with some surprise that one realizes that a complete sign inventory, comprising over 19,000 separate street name and number signs, is now tightly packed in the small area of 312 square feet. As new signs are installed, and old or damaged ones replaced when necessary, the careful maintenance of this inventory enables replacement signs to be ordered sufficiently in advance of anticipated need. The inventory level to be maintained for any particular street sign is carefully determined by several factors, including length of street, which generally determines total number of signs of that specific name, anticipated damage frequency and other variables.

Two men and a truck are generally in constant service for this one function, and the log book of last year's activity indicates a total of 2700 street sign calls for that period, with 480 new heads installed, 216 new poles, 384 pole repairs, 48 relocations, 552 "Curb Your Dog" signs installed in requesting neighborhoods, and other like services of this character.

The installation of a new tank-type cleaner containing special detergents has enabled the overhaul and salvage of many signs that previously had to be discarded. In areas adjacent to the ocean, some signs have become so discolored as to become illegible after a short time; an overnight soaking in the new tank has often brought them back to an almost new condition at considerable cost savings.

ELECTRIC SHOP

The many highly specialized activities in which the Electric Shop is necessarily involved has led to the development of the present extremely able and well organized shop, but which is, unfortunately, now suffering from lack of space in which to conduct these very activities. This is particularly true of the space used for motor overhaul, which, while well-equipped, is now operating under the handicap of multi-level operation, and has to have essential equipment located over a wide area and in various rooms.

At present coil winding, armature dynamic balancing, varnishing, baking, etc., are scattered operations, but which should, for maximum efficiency be located in one area, and particularly, in logical sequence. The same is true of the many material components essential to such an operation, including the numerous types and gages of wire, insulation, bearings, sleeves and seals, and similar essentials. Should proposed yard expansion hopes materialize, present equipment and supplies, but most particularly, present talents and abilities, can be used to their ultimate and optimum advantage. The experience gained in many years of this type of specialized activity has led to the development of plans which could utilize the new areas to be incorporated in the expanded shop to their greatest effect.

At present, in the size range between one H.P. and 50 H.P., over 250 motors are rewound and repaired annually. In addition, a preventive maintenance program has been of untold economic value and importance in the sewage treatment and pumping plants, where extreme humidities, chemical corrosion and electrolysis problems are commonplace. Routine and periodic checks of essential motors discloses, by resistance value losses, incipient failures of armatures or field coils. These components can then be brought to the shop, baked to dry out all traces of moisture, and varnished with one of the specialized coatings which previous experience has demonstrated is best suited for that purpose. Such a program is of inestimable value in preventing failures of equipment, which, while always costly, can often occur at the most inopportune or even critical periods.

The electric shop is also well equipped for, and accomplishes the repair of, electric apparatus and appliances of all descriptions, electric clocks and clock systems, telephone, intercommunicating, and public address systems. While much of the work is inter-departmental, a substantial portion is, of course, required for the constant maintenance and even improvement, of the electrical facilities in the many public buildings for which the Bureau is directly responsible.

SHEET METAL SHOP

While no expansion or physical improvement of this shop is intended at this time, it is felt that particular attention should be directed to this activity for an especially commendable achievement of the past year.

As is permitted by the Charter, and valuable for objective cost comparisons, the Bureau was fortunate in May of 1958 in being the low, successful bidder on a public contract for the repair and rehabilitation of prison-type steel sash at County Jails #2 and #4. The Bureau bid of $9,542.00 was approximately half that of the next low bidder, and one quarter that of the other two bidders.

Not only were all of the contractual items completed within this contract price, but in addition, work on sash, which had been deleted under a unit price section of the specification for lack of funds, was done to the value of $3000.

Also, with the development of new techniques and labor-saving methods during the progress of this contract, the shop mechanics were able to correct operating difficulties on a great many additional sash, and thoroughly lubricate and grease the operating mechanisms on the majority of all sash in the entire institution. The monetary value of the last two operations cannot be accurately appraised, but must certainly be substantial. The point can certainly be made, however, that except under contract with City forces, such savings or benefits would have been lost.

STREET TRAFFIC PAINTING

Table A

Classification	Unit	Unit Amounts	Unit Cost	Total Cost
Traffic Line Striping	Lineal Mile	361.77	$103.16	$37,321.77
Traffic Line Spotting	Lineal Mile	47.06	107.72	5,069.32
Intersections-General				
(a) Crosswalks (Including words)	Lineal Feet	312,031	.1048	44,785.06
(b) Guidelines (Including words)	Lineal Feet	46,724	.1613	10,991.51
School Crosswalks (Including words)	Lineal Feet	98,598	.1782	22,477.40
Bus Zones (Including words)	Lineal Feet	95,596	.1100	15,306.29
Parking Stalls				
(a) Diagonal	Number of Stalls	1856	.9361	2,348.56
(b) 4-foot cross	Number of Stalls	4430	.6968	3,777.09
Railroad crossings	Lineal Feet	7273	.0978	750.64
Curb Painting				
(a) General	Lineal Feet	306,324	.0892	45,336.61
(b) Taxi	Lineal Feet	4220	.1060	793.97
TOTAL COST				$188,958.22

The cost shown is the direct cost including working foreman, labor, materials, supplies and contractual service corresponding to the Bureau work program and budgeted funds.

THE CARPENTER SHOP—WELL PLANNED AND EQUIPPED FOR ALMOST ANY JOB

EXTREMELY COMPACT LOCKSMITH SHOP DESIGNED FOR EFFICIENT OPERATION

ADMINISTRATIVE BUREAUS

R. Brooks Larter
Assistant Director, Administrative

The accomplishments of the administrative bureaus during 1957-58 include further consolidation of the telephone switchboard by absorbing the service of the Disaster Corps and the Public Utilities Commission. The telephone service of the Health Service System is scheduled to be included on the City Hall switchboard sometime in July 1958.

We are placing more and more emphasis on adequate telephone service in offices now connected with the City Hall switchboard. When such offices as the Retirement Board and the Public Administrator were moved, a thorough study of the telephone needs of each office and of the incoming telephone calls was made in order that both the employees and the public would be properly served. Also, studies are being made of improved methods of handling the heavy peak loads of incoming telephone calls to such offices as the Bureau of Building Inspection.

Unfortunately, funds were not approved for the 1958-59 budget for the expansion of the City Hall telephone switchboard. This expansion is greatly needed, since the present switchboard is overloaded and further consolidation of Civic Center telephone service is dependent on enlarged facilities and equipment.

The IBM machine accounting system progressed by taking over the traffic work from Central Tabulating and by proposing monthly appropriation statements to the operating bureaus. The type 402 Accounting Machine was found to have too limited a capacity and a type 407 machine has been ordered.

BUREAU OF ACCOUNTS

J. J. McCloskey, Chief Clerk

Of outstanding significance during the past year was the continuing development of the I.B.M. machine accounting system. The machines now are processing the financial transactions of all budgeted appropriations for the Maintenance and Operation Bureaus. In addition, by the end of the 1957-58 fiscal year, all timeroll charges for the entire Department were being processed by I.B.M.

Because of this last change, and for improved operating efficiency, the City Hall timeroll section, responsible for all City Hall bureau timerolls, was moved to a new location in the personnel office at the Maintenance Yard at 2323 Army Street. The shift involved the moving of one Accountant I and one General

Clerk, and the elimination of the duties of one General Clerk-Typist and a temporary Accountant I, as their duties were absorbed by the I.B.M. division.

The City Hall section of the Bureau of Accounts now is staffed by an Accountant II, an Accountant I and a General Clerk-Stenographer. The accounts for all capital improvements, Special Road Improvement and bond funds, under the jurisdiction of the Director of Public Works, are handled by this staff; including the preparation of monthly and final reports to the State of California showing in detail the transactions and expenditures for projects set up under the Collier Burns Highway Act.

The Bureau's principal office is located at the Department of Public Works Maintenance Yard, 2323 Army Street, at which the greater number of employees is located. This yard office handles the operating accounts for the following Maintenance and Repair Bureaus: Bureau of Building Repair, Bureau of Sewer Repair, Sewage Treatment Plants, Sewage Pumping Stations, Bureau of Street Cleaning, Bureau of Street Repair, Bridges and Tunnels and the Street Tree Planting Division.

PERSONNEL

As of June 30, 1958, the permanent staff of 36 employees included:

1 - Chief Clerk
2 - Head Clerks
5 - Accountants I
2 - Accountants II
1 - Accountant III
11 - General Clerks
1 - Senior Clerk
4 - General Clerk-Stenographers
4 - General Clerk-Typists
1 - Supervisor I.B.M.
2 - Key Punch Operators I.B.M.
2 - Tabulating Machine Operators I.B.M.

In addition to the above employees, a Storekeeper is assigned by the Purchaser of Supplies to perform duties in connection with the operation of the sub-storeroom and materials yard.

During the year, one permanent position of Accountant I was re-classified to a Key Punch Operator I.B.M. in connection with the machine accounting system installed during the month of March, 1957.

Budget expenditures for operation of the Bureau of Accounts for the fiscal year 1957-58 were as follows:

Permanent Salaries	$142,415.00
Contractual Services	14,847.00
Materials & Supplies	3,472.00
Services of Other Departments	4,666.00
Equipment	3,299.00
TOTAL	$168,699.00

FUNCTIONS AND ORGANIZATION

The operating functions of the Bureau embrace control of payroll procedure, personnel records and field time-keeping; purchase order requisitions; sub-storeroom and inventories; automotive expenditures and gasoline and tire records; work order job costs and invoicing; side sewer job and refunds accounts; State gas tax subventions and Bond Funds accounts; the cash revolving fund for the Department; the stores revolving fund; budget preparation and controlling accounts; Radio Control Station; and the supplying of clerical service to all of the operating bureaus.

Included in the general functions of the Bureau are three well defined sub-divisions: Payrolls and Personnel; Purchasing and Stores including inventories; Gas Tax Subventions, Bond Funds and Budgetary and Cost accounting and reports.

OPERATIONS

Job costs pertaining to damages to City property under the jurisdiction of the Department are compiled and forwarded to responsible parties for collection. These costs amounted to $13,576.83 for the fiscal year and embraced 235 cases, covering damages to bridges, automotive equipment, street structures, traffic signals, street signs, street trees, traffic devices and prisoner damage to police stations. The Bureau handled the fiscal processing of contracts under bond issues for Street Improvements, Sewers, Sewage Treatment Plants, Schools, Hospitals, and Fire Houses under programs which are expected to continue into subsequent years.

In the supplying of materials for the varied activities of the Department, a sub-storeroom and a material yard are conducted, through which 25,140 transactions were handled involving the delivery of 92,390 items to jobs. Outside purchases from vendors brought about the issuance of 6,085 requisitions involving 24,040 items and 5,890 delivery orders involving 23,560 items and

14,320 storeroom tags involving the delivery of 42,860 items and 122 requisitions on storekeeper involving 1,830 items.

The Stores Revolving Fund under the control of the Bureau is designed to permit the purchase in advance of constantly used materials. Plumbing supplies, electrical items, paints, hardware, lumber, glass, tools, sewer pipe, brick, cement, castings and miscellaneous needs which can be foreseen, are carried in Stores and charged out to the various jobs as needed. Controls have been established which facilitate monthly reimbursements for goods withdrawn, and stores records are maintained on a perpetual inventory basis subject to annual physical check.

The Department Cash Revolving Fund of $1,500.00 is used by the Bureau for payment of small bills and transportation charges, and enables workmen on field work to make cash purchases at neighborhood stores, thus avoiding trips to downtown establishments. During the fiscal year, 55 monthly Revolving Fund vouchers were prepared, requiring the issuance of 1,747 warrants for a total of $18,464.41. All transactions are conducted under controls set up by Ordinance of the Board of Supervisors.

Detailed records of all expenditures are maintained, particularly on jobs performed under job estimates and work order procedures. In these, the Charter requires that all elements of indirect and supervisory costs be considered and made part of the final job cost. To accomplish this, indirect labor is pro-rated monthly on an exact percentage basis, as are overhead charges for accident compensation, sick leave, vacation, retirement, equipment replacement and miscellaneous. These items of overhead are accumulated in reserves to meet the requirements designated. Charges for small tools and shop supplies used in work order operations are made against the miscellaneous reserve.

BUREAU OF ACCOUNTS

Interdepartmental Service Under Work Order Procedure For:

Schools	$ 940,697.12
Health	23,533.39
Recreation – Park	23,391.41
Maintenance and Repair	422,721.69
Capital Improvements	962,044.10
Special Gas Tax	2,166,112.53
Special Inspection	11,943.29
State Highway Cleaning	46,215.70
Paving Side Sewers	28,858.18
State Highway Repairs	7,772.93
Heater Planing – Van Ness Avenue	5,970.20
State Highway Trust Fund (Co-op)	2,375.50
1949 Airport Bonds	742.84
Miscellaneous	35,428.65
1948 Sewage Treatment Bonds	16,858.67
1944 Sewer Bonds	2,133.28
1954 Sewer Bonds	550,209.25
1947 Street Improvement Bonds	183,437.60
1948 School Bonds	158,552.94
1956 School Bonds	43,032.72
1952 Firehouse Bonds	29,074.95
1954 Laguna Honda Home Bonds	325,407.39
1954 San Francisco Hospital Bonds	528,787.81
1954 Exhibit Hall Bonds	26,815.09
1956 Hall of Justice Bonds	15,204.95
War Memorial	8,727.85
De Young Museum	11,015.27
Legion of Honor	16,062.01
Engineering	3,948.61
Public Utilities	11,849.12
Publicity and Advertising	1,935.95
Special Road Improvement	68,525.90
TOTAL INTERDEPARTMENTAL SERVICE	$6,679,336.89

SUMMARY OF TRANSACTIONS

Budgeted Funds, Subject to Control and Appropriated to:

	BUDGET		EXPENDITURE	
BUREAU	1956-57	1957-58	1956-57	1957-58
GENERAL FUND				
General Office	$ 148,734	$ 174,411	$ 145,070	$ 173,318
General Office - Improvements	1,306,444	1,487,325	844,535	885,139*
Architecture	430,717	449,615	427,645	448,832
Building Inspection	404,677	425,414	389,510	421,589
Engineering	451,413	472,206	455,463	471,992
Central Permit	47,475	50,128	46,556	49,776
Accounts	152,767	171,286	142,175	168,699
Building Repair	2,518,216	2,450,167	2,355,376	2,360,297
Traffic Striping	198,487	219,806	187,682	188,958
Street Cleaning	1,886,442	2,087,578	1,873,536	2,075,514
Sewer Repair	928,509	930,980	906,180	941,471
Sewage Treatment Plants	943,079	1,027,161	924,333	998,578
Sewage Pumping Stations	96,961	108,183	94,490	107,071
SPECIAL ROAD IMPROVEMENT FUND				
Street Repair	1,415,555	1,523,416	1,393,672	1,494,314
Bridges and Tunnels	161,607	170,989	159,127	167,004
Traffic Engineering	455,487	448,425	417,099	428,823
Traffic Signal Maintenance	238,478	291,675	233,081	280,417
Engineering Adm.	45,975	93,140	45,363	87,211
Maintenance and Reconstruction	200,800	69,644	83,225	67,872
Construction	1,538,930	2,513,063	891,116	1,212,734
Street Tree Planting	115,050	143,751	110,863	137,881ø
SPECIAL GAS TAX STREET IMPROVEMENT				
Maintenance	353,000	364,527	320,705	326,498
Construction	2,177,000	3,190,000	1,088,583	627,821⌿
TOTALS	16,215,803	18,862,890	13,535,385	14,121,809

* Expenditures of $610,037 from funds budgeted in prior years.
ø Expenditures of $738,838 from funds budgeted in prior years.
⌿ Expenditures of $591,878 from funds budgeted in prior years.

CENTRAL PERMIT BUREAU

Sidney Franklin, Supervisor

FUNCTIONS

The Central Permit Bureau came into being in 1932 with the advent of the new City Charter. It was created to fill a long felt need for a central office in which all permits pertaining to buildings and streets could be obtained with a minimum of effort and inconvenience.

For many years this centralization was only partially achieved due to the fact that permits for electrical work continued under the control of the Department of Electricity, and permits for plumbing were still being issued by the Department of Public Health. However, in 1950 the electrical inspectors were incorporated into the Department of Public Works and on July 1, 1958, plumbing inspection also became a function of this department. Consequently, the ensuing fiscal year (1958-1959) will be the first year that this bureau will completely serve the purpose for which it was created.

The Central Permit Bureau is the focal point of all permits coming under the jurisdiction of the Department of Public Works. This includes permits for the erection, alteration, demolition and moving of buildings (as well as the subsidiary permits in connection therewith), permits for all types of billboards and signs, and permits involving the use or excavation of streets and sidewalks. It is the function of this bureau to receive applications for these various types of permits, route them to the proper departments and bureaus for their approval, issue the necessary permits and collect the required fees.

The Central Permit Bureau is the custodian of all public records relevant to permits issued by the Department of Public Works, and of all plans and specifications in conjunction with these permits. These records date back to the 1906 Earthquake and are assuming more importance each year in determining the status of buildings affected by our slum clearance program. Approximately 15% of the time of our personnel is now devoted to giving information obtained from our current and old records.

Another service performed in this bureau is the assignment of street addresses to all new buildings and the elimination of possible confusion resulting from improper existing numbers. Our official house number records are constantly referred to by realtors, title insurance companies, etc., when the correct street numbers for buildings must be obtained.

It is also the duty of the Central Permit Bureau to render bills for all claims for damages to property under the jurisdiction of the Department of Public Works, and for costs in excess of deposits in the installation of side sewers. The moneys collected from these bills, as well as all other receipts of the department, are cleared through this bureau for deposit in the proper funds in the City Treasury.

PERSONNEL

The personnel of the Central Permit Bureau, as of June 30th, 1958, was as follows:

1 Supervisor
1 Cashier
2 Senior Clerks
1 General Clerk-Stenographer
5 General Clerk-Typists

THE FOLLOWING TABLES ILLUSTRATE THE SCOPE OF THE ACTIVITIES OF THE CENTRAL PERMIT BUREAU

TABLE I
PERMITS ISSUED AND FEES RECEIVED

	1957-1958		1956-1957	
	Permits	Fees	Permits	Fees
Buildings	11,042	$ 224,454	11,389	$ 199,012
Billboards	165	603	138	584
Demolitions	313	3,075	298	3,325
Boiler Installations	79	536	64	372
Boiler Inspections	888	5,323	740	3,997
Street Space *	810	43,504	1,291	28,933
House Numbers	812	3,114	620	2,356
House Moving	99	1,980	23	460
Excavations (Pub.Util.,etc.)	10,426	22,085	9,759	18,424
Excavations (Exclu. of Util.) *	727	3,881	653	2,924
Flue Registrations	52	1,040	60	1,200
Flues - New Buildings	22	73	55	84
Flues - Old Buildings	73	256	76	222
Flues - New Buildings, Coupons	104	1,300	72	900
Flues - Old Buildings, Coupons	22	440	17	340
Posting Notices	729	1,973	551	1,547
Flower Markets	39	1,248	43	1,428
Advertising	10	1,536	20	2,862
Surveys	23	11,730	26	10,950
Engineering Inspections	51	17,405	51	17,025
Electrical Inspections	16,033	95,106	17,454	91,006
Sign Inspections	Included in Elec. Insp.	6,916	Included in Elec. Insp.	8,449
Electrical Sales	2,304	23,219	2,283	23,093
Sidewalks	6	-	-	-
Plan Checking	5,231	47,611	3,111	46,106
Architect's Investigation	87	1,335	23	855
Garage Door Coupons	38	2,850	18	1,350
Hearings for Substitute Material	7	490	8	640
TOTAL - TABLE I	50,192	$ 523,083	48,843	$ 468,444
TOTAL - TABLES II & III	2,199	4,607,685	2,116	5,652,785
GRAND TOTAL - PERMITS & REVENUE	52,391	5,130,768	50,959	6,121,229

* Permits and fees only. See Table II for refundable deposits.

TABLE II
MISCELLANEOUS DEPOSITS

	1957-1958		1956-1957	
Refundable Deposits	Permits	Deposits	Permits	Deposits
Street Space	*	$ 20,620	*	$ 17,300
Subsidewalks	1	6,430	–	–
Deposit on Plans	1,446	93,133	1,354	52,762
Excavations	*	1,249	*	785
TOTAL	1,447	$121,432	1,354	$ 70,847
Partially Refundable Deposits:				
Side Sewers	596	$223,950	534	$181,375
Excess Costs – Side Sewers	35	2,181	100	9,331
TOTAL RECEIVED	631	$226,131	634	$190,706
AMOUNT REFUNDED		$ 88,444		$ 75,140
Net Revenue applied or to be applied to Installation Costs		$137,687		$115,566
Agency Deposits:				
Street Improvement Bonds	121	$ 10,111	128	$ 9,802
TOTAL	2,199	$357,674	2,116	$271,355

* Street Space and Excavations require both a fee and a deposit. Amounts shown are deposits only.

TABLE III

MISCELLANEOUS REVENUE

	1957-1958 Revenue	1956-1957 Revenue
General Fund	$ 62,041	$ 49,219
Special Road Improvement Fund	2,820,721	2,779,218
State Highway Trust Fund	24,732	22,337
1948 School Bond Fund	1,302	2,307
Special Gas Tax - Street Improvement Fund	1,340,419	2,527,549
San Francisco Unified School District Fund	-	300
1952 Fire House Fund	-	500
1933 Sewer Bond Fund	1,396	-
TOTAL	$4,250,611	$5,381,430

TABLE IV

STATEMENT OF CONDITION

SPECIAL FUNDS AS OF JUNE 30, 1958

	Balance June 30, 1957	Deposits 1957-1958	Refunds 1957-1958	Balance June 30, 1958
Special Permit Fund (Street Space and Subsidewalk Dept.)	10,190.00	27,050.00	17,390.00	19,850.00
Street Improvement Fund (Payments of St. Improv. Bonds)	465.27	-	-	465.27
Excavation Fund	1,829.30	1,248.50	993.50	2,084.30
Deposits on Plans	7,423.00	93,133.00	90,223.00	10,333.00

BUREAU OF ENGINEERING - CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Way
July 1, 1957 - June 30, 1958

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1957-1958
A	Major Thoroughfares	4	$3,650,602.00	$2,181,155.00
B-1	Streets - Private Contracts	25	362,491.00	326,034.00
B-2	Streets - Assessment Proceedings	13	335,183.97	202,720.61
B-3	Streets - Public Contract City Pay	10	324,266.74	466,001.59
B-4	Streets - Car Track Removal	2	186,824.43	256,204.11
C	Traffic Signals & Channelization	6	190,309.66	414,132.78
D-1	Sewers - Pipe Vitrified Clay & Concrete	5	664,569.03	690,583.70
D-2	Sewers - Concrete Monolithic	2	191,506.90	238,627.80
E	Miscellaneous	40	330,781.15	671,632.10
	TOTALS	107	$6,236,534.88	$5,447,091.69

TABLES

On the following pages appear separate tables of current contracts for each of the types of Construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
Spec. Rd.	Special Road Improvement Fund
Major Sts.	Special Gas Tax Improvement Fund
Assess. Proceedings	Assessed To property benefiting under the Street Improvement Ordinance of 1934
Pd. Prop. Owners	Cost borne by Property Owners under private contract
1944 Sewer Bond	Bond Issue voted by citizens on November 7, 1944 - $12,000,000
1947 St. Imp. Bond	Bond Issue voted by citizens on November 4, 1947 - $22,850,000
1948 Sewage Tr. Bond	Bond Issue voted by citizens on June 1, 1948 - $15,000,000
1954 Sewer Bond	Bond Issue voted by citizens on June 8, 1954 - $12,645,000
1947 Off Street Parking Bond	Bond Issue voted by citizens on November 4, 1947 - $5,000,000
1954 Laguna Honda Bond	Bond Issue voted by citizens on November 2, 1954 - $5,475,000

BUREAU OF ENGINEERING - CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Way
July 1, 1957 - June 30, 1958

Table	Type of Construction	No.	Contracts Awarded Aggregate Value	Amount Expended Fiscal Year 1957-1958
A	Major Thoroughfares	4	$3,650,602.00	$2,181,155.00
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1954 Laguna Honda Bond	Bond Issue voted by citizens on November 2, 1954 - $5,475,000

CURRENT CONTRACT DATA 1957-1958

DESCRIPTION & CONTRACTOR	AWARDED	COMPLETED DATE OR %	CONTRACT AMOUNT	AMOUNT EXPENDED 1957-1958	FUND
A-MAJOR-THOROUGHFARES					
Market St. & Portola Drive-Hattie St. to Corbett Ave. (Widening & Realignment)	7-18-56	93%	$2,444,830.00	$1,061,480.00	Major St. Spec. Rd.Impr. 1944 Sewer Bd.
M. & K. Corporation	- - - - -		- - - - - - -		
Portola Drive-Twin Peaks Blvd. to Sloat Blvd. Chas. L. Harney Inc.	11-6-57	38%	949,681.00	270,045.00	Major St. Spec. Rd. Impr. 1954 Sewer Bd.
7th St. 16th St. to Townsend St. (Reconstruction) Chas. L. Harney Inc.	12-27-57	71%	149,460.00	90,695.00	Major St. 1954 Sewer Bd.
Geary Blvd.-Presidio Ave. to 33rd Ave. Pavement Reconstruction & Tr. Removal Chas. L. Harney Inc.	1-17-58	23%	1,429,168.00	280,585.00	1947 Str.Impr.Bd.
Jamestown Ave.-Extension and Other Access Roads to Bayview Park Stadium (Grading) Chas. L. Harney Inc.	4-12-58	47%	1,122,293.00	478,350.00	1947 Str.Impr.Bd.
TOTAL AWARDED AND EXPENDED DURING FISCAL YEAR			$3,650,602.00	$2,181,155.00	

CURRENT CONTRACT DATA 1957-1958

Street or Subdivision	From To	Impvts	Contractor	Awarded	Completed Date Or %	Contract Amount
B-1 STREETS-PRIVATE CONTRACTS - PD. PROP. OWNERS						
Dalewood Way 550' E.	Lansdale Ave.	S.C.P.	Chas.L.Harney, Inc.	9-14-55	3-22-56	$ 15,000.00
2nd Ave.	At Parnassus Ave.	S	Jas.Barnes Constr.Co.	11-9-55	99%	2,000.00
Harkness Ave.(S½)W'ly Line Sparta 62' E.		C.P.	E. J. Treacy	8-8-56	8-1-57	1,715.00
McKinnon Ave.	Barneveld Ave.-Upton St.	S.C.P.	Fay Impr. Co.	11-21-56	8-20-57	22,250.00
Kearny St.	Lombard St.-Chestnut St.	S-Wall	Theo G. Meyers & Son	1-23-57	95%	10,000.00
Amherst Terrace	Subdivision	S.C.P.	Arthur Haskins, Inc.	2-6-57	10-14-57	43,000.00
Somerset St.	Ordway St.-Mansell St.	S.C.P.	Fay Impr. Co.	4-12-57	11-1-57	12,500.00
Felton St.	Princeton St.-Cambridge St.	S.C.P.	Arthur Haskins, Inc.	4-12-57	10-14-57	20,000.00
Carroll Ave.	Ingalls St.-Hawes St.	S.C.P.	Fay Impr. Co.	4-26-57	11-12-57	25,100.00
Marvel Court	32nd Ave.240 Ft. W.	S.C.P.	Chas. L. Harney, Inc.	5-1-57	11-1-57	12,300.00
Revere Ave. S/w½	250 Ft.N of Rankin St.	S.	Prodanovich Inc.	5-1-57	5-16-58	800.00

CURRENT CONTRACT DATA 1957-1958

Street or Subdivision	From To	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
Forest Knolls Contract 2	Subdivision No.1	S	Gellert Bros.	5-8-57	9-16-57	$ 49,000.00
Sherwood Court	South of Myra Way	S.C.P.	Eaton & Smith	6-14-57	10-10-57	11,000.00
Forest Knolls Contract 3	Subdivision No.1	S.C.P.Ltg.	Gellert Bros.	7-17-57	12-10-57	38,500.00
Alabama St.	North of 16th St.	P	Chas.L.Harney,Inc.	8-30-57	4-25-58	18,364.00
Spring St.(w½) 145' S	Sacramento St.-	C.P.	Cahill Bros.	9-13-57	9-17-57	700.00
Marietta Dr.	Arroyo Way-Teresita Blvd.	S.C.P.	Chas.L.Harney, Inc.	9-18-57	55%	100,000.00
Excelsior Ave.	East of Athens St.	S	Michael Murphy Jr.	10-11-57	10-23-58	1,200.00
Midtown Terrace Contract 1	Subdiv.No. 6	S	Gellert Bros.	10-16-57	12-13-57	22,500.00
Perego Heights Contract 1	Subdiv.	S	T.D. Harney	10-23-57	95%	10,000.00
Midtown Terrace Contract 2	Subdiv. No. 6	C.P.	Gellert Bros.	11-20-57	75%	23,000.00
Aquavista Way (E½)	561' & 780' N of Skyview Way	S	Gellert Bros.	1-3-58	1-13-58	800.00
20th Ave.	50' N of Wawona	S	E. J. Treacy	1-8-58	1-16-58	500.00
*Felton St. (Portions)	Princeton St.- University St.	C.P.	Arthur Haskins, Inc.	1-10-58	4-28-58	4,000.00

CURRENT CONTRACT DATA 1957-1958

Street or Subdivision	From To	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
Midtown Terrace Contract 1	Subdiv No. 7	S	Gellert Bros.	2-14-58	2-16-58	$ 13,000.00
Forest Knolls Contract 4	Subdiv No. 1	C.P.-Gr	Gellert Bros.	2-21-58	0	8,000.00
Glendale St. 284'W	Market St.-	S.C.P.	T.D. Harney	3-12-58	60%	9,400.00
Carroll Ave.(N½) 375' E.	Jennings St.-	C.P.	C. L. Harney, Inc.	4-3-58	0	5,000.00
Miraloma Park Within	Certain Streets	Gr	Gellert Bros.	4-11-58	10%	43,500.00
Victor St. Bryant St.	Closing At	C.P.	C.L.Harney, Inc.	4-23-58	6-23-58	400.00
Midtown Terrace Contract 2	Subdiv. No. 7	C.P.	Gellert Bros.	4-25-58	70%	17,200.00
Verna St. 300' N	Teresita Blvd.-	S.C.P.	The Fay Improv.Co.	4-30-58	30%	10,500.00
Dolores St.	S. of 30th St.	S	The Fay Improv.Co.	5-2-58	5-15-58	2,080.00
Pretor Way -	Guttenberg - Concord	S.C.P.	The Fay Improv.Co.	5-9-58	0	13,800.00
Hanover St.(N½) Hanover St.(S½)	Guttenberg-Concord Guttenberg-Watt	S.C.P.	The Fay Improv.Co.	5-21-58	0	12,600.00
Clarendon Ave.	Inters. At Christopher Dr. and Palo Alto Ave.	S	Gellert Bros.	5-21-58	5-26-58	1,900.00

CURRENT CONTRACT DATA 1957-1958

Street or Subdivision From To	Impvts	Contractor	Awarded	Completed	Contract Amount
Concord St. Brunswick St.- Hanover St.	Gr.	Fay Improvement Co.	6-18-58	0	$ 1,000.00
Beach St. S½ Polk St.- 261' West	S.C.P.	The Lowrie Paving Co.,Inc.	6-20-58	10%	4,547.00
Total Awarded During Fiscal Year					$362,491.00
Total Value of Work Done During Fiscal Year					$326,034.00

* Remaining Portions improved under Public Contract

S= Sewers C= Curbs P = Paving Gr =Grading Ltg= Lighting

CURRENT CONTRACT DATA 1957-1958

Street or Subdivision	From To	Impvts	Contractor	Awarded	Completed Date or %	Contract Amount
B-2 STREET ASSESSMENT PROCEEDINGS						
University St.	Olmstead St.-Dwight St.	S.C.P.	Fay Impr. Co.	8-15-56	10-18-57	$ 18,168.92 (14,168.34)-
Holladay Ave.	Faith St.-Mayflower St.	S.C.P.	Chas.L.Harney	3-6-57	10-25-57	16,523.98 11,190.18)-
Madison St. Valmar Terr.	Sillman St.-Pioche St. Sillman St.-Madison St.	S.C.P.	Chas.L.Harney	3-29-57	10-22-57	23,680.79 (12,187.99)-
16th St.	Roosevelt Way-East Term.	S.C.P.	Fay Impr. Co.	4-12-57	12-18-57	17,327.07 (12,468.09)-
Boylston St. Gaven St.	Gaven St.-Sweeney St. Boylston St.-Bowdoin St.	S.C.P.	Fay Impr. Co.	4-12-57	11-1-57	30,830.52 (7,648.51)-
Detroit St.	Joost Ave.-Monterey Blvd.	Stair	K.S. Scheyer	4-17-57	7-6-57	3,396.74 (1,698.37)-
Harvard St.	Felton St.-Burrows St.	S.C.P.	Fay Impr. Co.	6-26-57	5-2-58	16,175.15 (6,200.00)-
				- - -	- - -	- - - - - -
Mansell St.	Somerset St.-Goettingen St.	S	E. J. Treacy	8-21-57	10-17-57	3,456.89 (2,046.52)-
Clarendon Ave.	Stanyan St. - Olympia Way	S	A.Dale Williams	8-30-57	12-30-57	48,123.29 (33,357.30)-
Prague St.	Excelsior Ave.-Brazil Ave.	S.C.P.	Fay Impr. Co.	11-20-57	95%	22,224.20 (7,000.00)-
Delta St.	Harkness Ave.-Hamilton St.	C.P.	Chas.L.Harney	11-27-57	6-26-58	8,505.40 (2,500.00)-
Detroit St.	Mangells Ave.-Joost Ave.	C.S.P.	E. J. Treacy	12-20-57	60%	8,746.70 (4,500.00)-

CURRENT CONTRACT DATA 1957-1958

Street Or Subdivision	From To	IMPVTS	CONTRACTOR	AWARDED	COMPLETED	CONTRACT AMOUNT
*Felton St.(N'ly½)	University St.-120'W	C.P.	Bragato Paving	1-10-58	4-28-58	$1,560.00 (600.00)-
Thomas Ave.	Ingalls St.-Hawes St.	C.P.	Chas.L.Harney, Inc.	1-10-58	4-30-58	14,160.89 (91.50)-
Minerva St.	Plymouth Ave.-380' E.	S	Fay Impr. Co.	4-9-58	5-28-58	5,785.00 (0)-
Bouthwell St. & Islais Creek Channel	Industrial St.-Helena St.	C.P.	Fay Impr. Co.	4-30-58	0%	10,898.00 (0)-
Crocker Amazon Tract - Streets Within		C.P.	Douglass & Woodhouse	5-7-58	0%	118,170.00 (93,000.00)-
Rosenkranz St.	Bernal Hts.Access Rd.-125'N	C.P.S.	Fay Impr. Co.	5-28-58	0%	8,483.00 (4,400.00)-
Bowdoin St.	Gavin St.-Sweeny St.& X-ing	S.C.P.	M. J. Lynch Co.	5-28-58	0%	9,177.50 (4,000.00)-
Burnett Ave.	Hopkins Ave.-S-Exist.Pavement	C.P.	Fay Impr. Co.	6-27-58	0%	75,893.10 (37,000.00)-
Total Awarded During Fiscal Year						$335,183.97
Total Value of Work Done During Fiscal Year						$202,720.61

( )-Estimated or Final Amount of City Obligation. Balance through Assessment of Property Benefited. City Funds From Special Road Improvement Fund.

*Remaining Portion Improved Under Private Contract

S = Sewers, C = Curb, P = Paving Stair. = Stairway

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
B-3 STREETS - PUBLIC CONTRACT CITY PAY					
Woodward St. Between 14th St. & Duboce Ave. (Reconstruction) The Lowrie Paving Co., Inc.	3-1-57	7-10-57	$ 19,814.64	19,814.64	1954 Sewer Bd. Spec.Rd.Impr.
Montgomery St.-Post St. To Sutter St. (Reconstruction) Pacific Pavements Co.,Ltd.	5-15-57	7-29-57	11,861.66	11,861.66	Spec.Rd.Impr.
Maiden Lane - Stockton St. To Kearny St. (Reconstruction) The Fay Impr. Co.	5-22-57	8-23-57	15,664.06	15,664.06	Spec.Rd.Impr.
Mission District Streets (Street Resurfacing) Pacific Pavements Co.,Ltd.	6-28-57	1-21-58	162,142.79	162,142.79	Major Sts.
Lincoln Way At La Playa (Construction of A Left Turn Connection) Pacific Pavements Co.,Ltd.	7-17-57	9-10-57	3,365.35	3,365.35	Spec.Rd.Impr.
Richmond District Streets & Others (Brick Pavement Replacement) The Lowrie Paving Co.,Inc.	9-18-57	2-18-58	71,646.49	71,646.49	Spec.Rd.Impr. Major Sts.
Natoma St. Reconstruction 3rd To 4th St. (Reconstruction) Chas. L. Harney, Inc.	9-18-57	5-2-58	24,203.93	24,203.93	Spec.Rd.Impr.
Conkling St. Extension (Construction) The Lowrie Paving Co., Inc.	11-8-57	5-14-58	11,322.55	11,322.55	S.F. Unif. Sch. Dist.

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
Haight St. - Laguna St. to Buchanan St. (Reconstruction & Sewer Replacement) The Fay Impr. Co.	11-20-57	3-11-58	$ 22,409.90	$ 22,409.90	Spec. Rd. Imp 1954 Sewer Bd.
Alemany Blvd. - San Jose Ave. & Junipero Serra Blvd. (Resurfacing) The Lowrie Paving Co., Inc.	12-18-57	85%	151,016.00	106,420.00	Spec.Rd.Impr. Major Streets
Curb And Gutter Reconstruction (Reconstruction) Contr. #1 The Fay Impr. Co.	4-2-58	5-20-58	17,150.22	17,150.22	Spec.Rd.Impr.
Bernal Heights Access Rd.-Rosenkranz to Carver (Grading) The Fay Impr. Co.	4-11-58	0	989.00	0	Spec.Rd.Impr.
Beach St. (N½) - Polk St. to 261' W (Curbs & Paving) The Lowrie Paving Co., Inc.	6-20-58	0	4,706.30	0	Spec.Rd.Impr.
5th & Mission St. - Garage (Pavement & Curb Reconstruction) Chas. L. Harney, Inc.	6-27-58	0	17,457.00	0	Spec.Rd.Impr.
Total Awarded And Expended During Fiscal Year			324,266.74	$466,001.59	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
B-4 STREETS - CAR TRACK REMOVAL					Major Sts. Muni R.R.
Columbus Ave. And North Point St. (Track Removal & Pavement Reconstruction) The Fay Impr. Co.	12-7-56	7-27-57	$261,942.45	$48,252.45	Spec. Rd.Impr. 1954 Sewer Bond
Washington St. & Steiner St. (Track Removal & Pavement Reconstruction) Eaton & Smith	1-9-57	7-31-57	201,072.13	46,117.13	1954 Sewer Bond Spec.Rd.Impr.
	- - - - -		- - - - - -		
Chenery St. - 30th St. to Diamond St. (Tie Removal & Pavement Reconstruction) The Fay Impr. Co.	9-18-57	4-24-58	161,834.53	161,834.53	Spec. Rd. Impr 1947 Str. Impr.Bd. 1954 Sewer Bond Spec. Rd.Impr.
12th St. - Howard to Folsom (Reconstruction & Track Removal) The Fay Impr. Co.	5-21-58	20%	24,989.90	0	1947 Str. Impr.Bd.
Total Awarded and Expended During Fiscal Year			$186,824.43	$256,204.11	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C - TRAFFIC SIGNALS & CHANNELIZATION					
South of Market St. Contract No. 2 (Traffic Signals) Abbett Elect. Corp.	1-4-57	8-9-57	$ 86,778.02	$ 49,818.02	Major Str. Spec.Rd.Impr.
Post St. & O'Farrell St.- Between Presidio Ave. & Grant Ave. (Traffic Signals) R. Flatland	2-6-57	12-6-57	152,900.90	117,965.90	Spec.Rd.Impr.
Traffic Signals At Isolated Crossings 15th Contract (Installation) R. Flatland	6-21-57 - - - - -	1-22-58	59,802.20 - - - - - -	59,802.20	Major Str. Spec.Rd.Impr.
O'Farrell St. At St. Josephs (Channelization) Pacific Pavements Co. Ltd.	8-7-57	1-27-58	13,931.72	13,931.72	Spec.Rd.Impr.
Traffic Signals At Isolated Crossings 16th Contract (Installation) Marshall Elect. Co.	9-20-57	5-16-58	66,730.97	66,730.97	Spec.Rd.Impr. Major Street
Divisadero St. - California St. & Waller St. (Traffic Signals & Lights) R. Flatland	10-4-57	3-6-58	73,709.00	73,709.00	Major Sts. Spec.Rd.Impr.
Harrison St. & 2nd St. (Right Turn Lane) Love & Haun	10-11-57	12-2-57	3,590.61	3,590.61	Spec.Rd.Impr.
Lake Merced Blvd.& Stanley Drive (Channelization & Lighting) Pacific Pavements Co. Ltd.	1-3-58	6-2-58	22,734.36	22,734.36	Spec.Rd.I

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
Western Addition & Downtown Traffic Signal System (Interconnection of Control Wiring) Abbett Electric Corp.	3-12-58	95%	$ 9,613.00	$ 5,850.00	Spec.Rd.Impr.
Total Awarded and Expended During Fiscal Year			$190,309.66	$414,132.78	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE					
North Point Collecting Sewers - Sect. B-1 in Steuart St. (Construction) M. & K. Corporation	8-10-56	6-28-57	$183,738.26	$ 31,428.26	1954 Sewer Bond
Lake St. Sewer Section D - Arguello Boulevard (Construction) M. J. Lynch	10-31-56	7-26-57	113,741.48	27,126.48	1954 Sewer Bond
Anza Geary Sewer System Sect."A"					
14th Ave.-California St. to Lake St. (Construction) Wm. R. Cole	2-15-57	7-2-57	42,598.50	10,873.50	1954 Sewer Bond
Barneveld Ave. - Oakdale Ave. to McKinnon Ave. (Construction Auxiliary Sewer) M. J. Lynch	4-26-57	9-16-57	19,805.00	19,805.00	1944 Sewer Bond 1954 Sewer Bond
Geary Blvd. Sewer - Presidio Ave. to 14th Ave. (Sewer Construction Contract #1) M. J. Lynch					1954 Sewer Bond 1947 Str. Impr. Bd.
Foerster St. - Los Palmos Drive & Teresita Boulevard (Construction of Sewer) M. J. Lynch	6-24-57	8-21-57	37,960.80	37,960.80	1954 Sewer Bond 1947 Str.

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
Geary Boulevard Sewers - 16th Ave. to 23rd Ave. (Construction Contr. #2) Wm. R. Cole	7-3-57	3-12-58	$137,724.48	$137,724.48	1954 Sewer 1947 Str. Impr. Bd.
Larkin St. Sewer - O'Farrell St. to Post St. (Construction) M. & K. Corporation	8-30-57	3-14-58	96,457.20	96,457.20	1954 Sewer Bond
Cayuga Ave. - S-Geneva Ave. to Seneca Ave. (Drainage System) Associated Pipeline, Inc.	12-27-57	3-10-58	6,790.35	6,790.35	Spec, Rd. Impr.
Southeast Coll. Sewers - Sec. K-1 in Rankin St. from Davidson Ave. N'ly & in Davidson Ave. from Rankin to Selby Sts. (Construction) M. & K. Corp.	3-12-58	68%	134,960.00	85,255.00	1954 Sewer Bond
Gilman Ave. - Griffith to Hunters Point (Sewers & Paving) Chas. L. Harney, Inc.	6-27-58	0	288,637.00	0	Spec.Rd. Impr. 1944 Sewer Bond
Total Awarded and Expended During Fiscal Year			$664,569.03	$690,583.70	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
D-1 SEWERS - PIPE, VITRIFIED CLAY & CONCRETE					
North Point Collecting Sewers - Sect. B-1 in Steuart St. (Construction) M. & K. Corporation	8-10-56	6-28-57	$183,738.26	$ 31,428.26	1954 Sewer Bond
Lake St. Sewer Section D - Arguello Boulevard (Construction) M. J. Lynch	10-31-56	7-26-57	113,741.48	27,126.48	1954 Sewer Bond
Anza Geary Sewer System Sect."A"					
14th Ave.-California St. to Lake St. (Construction) Wm. R. Cole	2-15-57	7-2-57	42,598.50	10,873.50	1954 Sewer Bond
Barneveld Ave. - Oakdale Ave. to McKinnon Ave. (Construction Auxiliary Sewer) M. J. Lynch	4-26-57	9-16-57	19,805.00	19,805.00	1944 Sewer Bond 1954 Sewer Bond
Geary Blvd. Sewer - Presidio Ave. to 14th Ave. (Sewer Construction Contract #1) M. J. Lynch					1954 Sewer Bond 1947 Str. Impr. Bd.
Foerster St. - Los Palmos Drive & Teresita Boulevard (Construction of Sewer) M. J. Lynch	6-24-57	8-21-57	37,960.80	37,960.80	1954 Sewer Bond 1947 Str. Bond

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
Geary Boulevard Sewers - 16th Ave. to 23rd Ave. (Construction Contr. #2) Wm. R. Cole	7-3-57	3-12-58	$137,724.48	$137,724.48	1954 Sewer 1947 Str. Impr. Bd.
Larkin St. Sewer - O'Farrell St. to Post St. (Construction) M. & K. Corporation	8-30-57	3-14-58	96,457.20	96,457.20	1954 Sewer Bond
Cayuga Ave. - S-Geneva Ave. to Seneca Ave. (Drainage System) Associated Pipeline, Inc.	12-27-57	3-10-58	6,790.35	6,790.35	Spec, Rd. Impr.
Southeast Coll. Sewers - Sec. K-1 in Rankin St. from Davidson Ave. N'ly & in Davidson Ave. from Rankin to Selby Sts. (Construction) M. & K. Corp.	3-12-58	68%	134,960.00	85,255.00	1954 Sewer Bond
Gilman Ave. - Griffith to Hunters Point (Sewers & Paving) Chas. L. Harney, Inc.	6-27-58	0	288,637.00	0	Spec.Rd. Impr. 1944 Sewer Bond
Total Awarded and Expended During Fiscal Year			$664,569.03	$690,583.70	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
D-2 SEWERS - CONCRETE MONOLITHIC					
North Point Collecting Sewers Sect. B-2 (Construction) Chas. L. Harney, Inc.	1-4-57	54%	$459,181.00	$119,765.00	1954 Sewer Bond
McAllister St. - Buchanan St. to Webster St. (Sewer Gunite Lining) Cement Gun Construction Co.	5-8-57	7-15-57	8,787.80	8,787.80	1944 Sewer Bond General
Southeast Collecting Sewers - Section H-1, H-2, & H-3 Candlestick Intercepting Sewer, Sunnydale Diversion Structure & Rel. Work (Construction) McGuire & Hester	3-26-58	74%	189,110.00	110,075.00	1954 Sewer Bond
Pacific Ave. - Sansome St. to Montgomery St. (Sewer Gunite Lining) Johnson Western Gunite Co.	5-7-58	90%	2,396.90	0	General
Total Awarded and Expended During Fiscal Year			$191,506.90	$238,627.80	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS					
Laguna Honda Home - Turbine Generator Unit (Construction) Anderson & Rowe Inc.	11-9-55	8-22-57	$64,977.09	$13,777.09	1954 Laguna Honda Bond
Southeast Collecting Sewers Section G-1-2-3 Yosemite Pumping Sta. Diversion Structure Force Main And Connecting Sewers (Construction) M. & K. Corporation	3-21-56	7-9-57	354,180.61	59,145.61	1954 Sewer Bond
Laguna Honda Home-Steel Water Storage Tank & Related Appurtenances (Construction) Pittsburgh DesMoines Steel Co.	6-22-56	7-26-57	52,887.20	3,787.20	General
Christmas Treet Point-Radio Communication Center (Construction) Herrero Bros. Inc.	3-6-57	99%	269,265.90	166,345.00	Spec.Rd.Impr. General
North Point Sewage Treatment Plant-Replacement of Ventilation Ducts Valley Sheet Metal Co.	3-6-57	10-18-57	14,552.00	10,577.00	General
County Jail No. 2 - San Mateo Co. Furnishing & Installing Dampers Apex Sheet Metal Works	3-20-57	7-12-57	2,805.00	930.00	General
City Hall-Hot Water Lines & Heat Exchanger (Replacement) H. Goldman & Son	4-10-57	9-3-57	17,735.00	7,160.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
Civic Auditorium-Modernizing Electrical Facilities (Installation) Abbett Elect. Corp.	5-1-57	4-29-58	$ 93,853.15	$ 93,853.15	General
City Hall Fluorescent Lighting Fixtures Superior Court (Installation) Dexter Electric	5-1-57	8-9-57	3,385.00	3,385.00	General
A.W.S.S. Relocation-Golden Gate Ave. & Franklin St. (Relocation of High Pressure System) Associated Pipeline Inc.	5-8-57	8-1-57	3,475.00	3,475.00	State Highway
Richmond Sunset Sewage Tr.Plant Window Replacement (Reconstruction) M. E. Rahlmann Co.	5-8-57	8-2-57	5,656.00	5,656.00	General
Day St. - 30th St. - Sanchez St. (Reconstruction Curb & Sidewalk) Love & Maun	5-15-57	8-5-57	7,681.74	7,681.74	Spec. Rd. Impr.
N.P.S.T. Plant - Crane Service Platform & Stairs (Construction) M. E. Rahlmann Co.	5-15-57	8-16-57	2,782.00	2,782.00	1948 Sewage Tr.Bond
City Hall - Floodlights - Conduit & Wiring (Installation) Abbett Elect. Corp.	5-22-57	11-12-57	29,398.00	29,398.00	General
Southern Freeway Test Borings					

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
N.P.S.T. Plant - Stand-By Sand Pumps (Installation) Rodoni Becker Co.	6-7-57	11-13-57	$ 14,159.00	$ 14,159.00	1948 Sewage Tr. Bond
Central Fire Alarm Station Switchboard (Installation) Dahl Beck Elect.Co.	6-14-57	9-27-57	4,320.00	4,320.00	General
El Camino Del Mar Over East Slide Area (Test Borings) J. N. Pitcher Co.	6-19-57	11-18-57	2,371.60	2,371.60	Spec. Rd. Impr.Fund
Geary Expressway Underpass At Fillmore (Test Borings) P.& Z. Co.	7-3-57	12-30-57	510.60	510.60	Major Str.
7th & Harrison Sts. Fringe Parking Lot (Construction) Lowrie Paving Co. Inc.	8-21-57	10-18-57	14,490.86	14,490.86	General
S. E. Sewage Treatment Plant Heating & Ventilating Equipment Apex Sheet Metal	9-18-57	1-17-58	2,299.00	2,299.00	1954 Sewer Bond
Mache St. Near Benton Ave. (Retaining Wall) (Construction) Walter Lenkeit	10-11-57	1-10-58	14,480.80	14,480.80	Spec. Rd. Impr.

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
Twin Peaks Blvd. - Portola Drive & Panorama Drive (Slide) Arthur Haskins Inc	10-18-57	1-23-58	$ 8,350.82	$ 8,350.82	Spec. Rd.Impr.
Laguna Honda Home Incinerator (Construction) Martinelli Construction Co.	12-11-57	25%	44,849.00	7,875.00	General
Richmond Sunset Treatment Plant (Alteration To Sand Washers) F. Kern & Son	8-7-57	11-14-57	1,702.00	1,702.00	1948 Sewage Tr. Bond
7th St. Fringe Parking Lot (Relocate Gate In Fence) Colorado Fuel & Iron	11-1-57	12-4-57	131.00	131.00	General
Mission St. And South Van Ness Ave. (Modification Traffic Controller)	11-6-57	5-23-58	574.00	574.00	Spec. Rd. Impr.
Islais Creek Bridge (Repairs) Judson Pacific Murphy Corp.	11-6-57	11-29-57	1,438.50	1,438.50	Major Str.
North Point Collecting Sewers C-1-2 (Test Borings) P. & Z. Co.	11-6-57	1-27-58	2,564.19	2,564.19	1954 Sewer Bond
South Basin Sewer System (Test Borings) P. & Z. Co.	11-15-57	1-13-58	817.94	817.34	1954 Sewer Bond
County Jail No. 2 Stand-By Pump	11-22-57	5-7-58	6,893.00	6,893.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
Richmond Sunset Sewage Treatment Plant (Alterations to Grit Facilities) S. & Q. Construction Co.	11-15-57	2-20-58	4,650.00	4,650.00	1954 Sewer Bd.
S. E. Sewage Treatment Plant Storage Yard For Granite Curb A. Petersen & Sons	11-22-57	3-13-58	5,291.00	5,291.00	Spec.Rd. Impr.
Restani Pedestrian Way - S. of Geneva Ave. (Slope Stabilization & Drainage Fac.) Love & Haun	12-13-57	3-25-58	9,520.14	9,520.14	Spec.Rd. Impr.
Maintenance Yard (Sand Storage Fac. & Truck Port) Arthur Bros.	12-13-57	99%	72,600.00	53,625.00	Spec.Rd. General
Richmond-Sunset Sewage Treatment Plant (Additional Office Rooms, etc.) J. C. Collins, Wellnitz & De Narde	1-15-58	99%	31,269.00	23,250.00	1954 Sewer Bd.
Crestlake Dr. - N½ - Bet. Palos Pl. & Paraiso Pl. (Concrete Sidewalk) Fred Ferrando & Co.	1-15-58	3-12-58	1,380.40	1,380.40	Spec.Rd. Impr.
County Jail No. 2 - in San Mateo Co. (Paint & Repair Water Stor. Tank) Ray Wright's Wldg. Shop	1-24-58	4-16-58	1,718.75	1,718.75	General
Jackson Square Area (Tree Planting in S.W. Area) Bernard Gayman	1-24-58	94%	2,926.00	1,950.00	Spec.Rd. Impr.

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
Dept. of Electricity - 270 Golden Gate Avenue (Fire Escape & Interior Platform) Arthur W. Baum	1-29-58	6-27-58	$ 1,627.00	$ 1,627.00	General
Southeast Sewage Treatment Plant (Galvanizing Existing Handrails) Mortenson Construction	1-31-58	3-21-58	7,887.22	7,887.22	General
Civic Auditorium (Replacement of Roof Drain & Appurt.) Jack Rosen, Inc.	1-31-58	72%	4,851.00	2,625.00	General
Winthrop St. - Bet. Lombard & Chestnut St. (Remove Fallen Rock From Slide Area) Chas. L. Harney	2-19-58	2-20-58	988.96	988.96	Spec. Rd. Impr.
Lincoln Way - N. Side - Arguello Blvd. to 9th Avenue Power, Mullin & Richardson	2-28-58	5-29-58	16,340.45	16,340.45	Spec. Rd. Impr.
Hyde St. - Bay to Chestnut Sts. (Street Lighting System) Coopman Electr. Co.	3-12-58	6-13-58	1,716.00	1,716.00	Spec. Rd. Impr.
23rd St. Overcrossing - At James Lick Freeway (Street Lighting System) Coopman Electr. Co.	3-12-58	50%	1,076.00	0	Spec. Rd. Impr.
3rd St. Overcrossing & Silver Ave. Br. At James Lick Freeway (Street Lighting System) Coopman Electr. Co.	3-12-58	6-13-58	1,268.00	1,268.00	Spec. Rd. Impr.

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E - MISCELLANEOUS (Continued)					
S.E. Sewage Treatment Plant (Scum Separator & Conveyor) Adam Arras & Son	3-19-58	30%	$ 7,758.00	$ 1,725.00	1954 Sewer Bd.
Youth Guidance Center (Chain Link Fence & Drainage Ditch) Adam Arras & Son	3-19-58	5-27-58	3,821.50	3,821.50	General
County Jail No. 2 in San Mateo Co. (Sandblast Interior of Water Storage Tank) W. L. Bipes	3-26-58	6-16-58	1,220.00	1,220.00	General
Cortland Ave. - #306 Nr. Bocana St. (Raze Wood Frame Dwelling) Bayshore Wreckers Inc.	3-28-58	5-12-58	389.00	389.00	General

CURRENT CONTRACT DATA 1957-1958

Description and Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
City Hall - SW Quandrant (Replace Waste, Vent and Cold Water Piping and Trim) Rodoni-Becker Co.	4-18-58	40	$ 9,383.00	$ 2,850.00	General
Air Raid Sirens - Various Locations (Installation) Ets-Hokin & Galvan	4-11-58	90	9,977.00	7,650.00	General
County Jail No. 2 in San Mateo County (Wiring, Piping and Appurtenances Main heating system) S & Q Construction Co.	5-9-58	84	2,485.00	1,575.00	General
Montgomery, Greenwich, Filbert and Alta Sts. and Montague Pl. (Street Lighting System) Electrical Maint.& Serv.Co.	5-16-58	0	2,947.00	0	Spec. Rd. Impr.
Golden Gate Heights (Handrailing for Stairways) Ruthern Co.	5-16-58	0	6,340.00	0	Spec. Rd. Impr.
Yosemite Ave. - 3rd to Mendell Sts. (Sidewalk Narrowing) The Lowrie Paving Co.	5-21-58	0	17,312.02	0	Spec. Rd. Impr.
TOTAL AWARDED AND EXPENDED DURING FISCAL YEAR . . .			$330,781.15	$671,632.10	

APPENDIX II

BUREAU OF ARCHITECTURE
CURRENT CONTRACT DATA SUMMARY
Showing All Contract Work Awarded or Under Construction
July 1, 1957 - June 30, 1958

Table	Type of Construction	Contracts No.	Awarded Aggregate Value	Amount Expended Fiscal Year 1957-1958
A-1	New School Building Cons.	4	$1,611.753.00	$2,604,3[illegible]
A-2	Miscellaneous Alterations	20	366,038.21	323,1[illegible]
A-3	Acoustical Jobs	2	3,259.00	3,259.00
A-4	Roofing Jobs	7	54,496.00	46,371.[illegible]
A-5	Resilient Flooring	3	31,898.00	8,183.00
A-6	Interior and/or Ext. Painting	12	205,467.75	13[illegible]
A-7	Yard Paving	5	90,451.00	38,029.00
B-1	Fire Dept., New Construction	1	182,511.00	356,890.81
B-2	Fire Dept., Reconstruction	4	26,954.00	199,358.23
C-1	San Francisco Hospital	7	875,747.08	1,284,738.29
C-2	Laguna Honda Home	6	1,420,120.00	1,677,691.59
D	M. H. deYoung Memorial Museum	3	2,382.55	9,177.53
E	Youth Guidance Center	4	16,290.00	132,34[illegible]
F	Civic Center	8	52,282.63	2,534,[illegible]41.15
G	Miscellaneous	13	2,060,094.86	220,530.89
	TOTALS	99	$6,999,745.08	$9,627,862.43

On the following pages appear separate tables of current contracts for each of the types of construction listed above. The source of the funds used to finance each project is indicated in the tables according to the following:

Abbreviation Legend

Designation	Description of Fund
General	General Fund City and County
1948 School	Unified School District, bond issue voted by citizens on November 2, 1948, $48,890,000.00
1956 School	Unified School District, bond issue voted by citizens on November 6, 1956, $27,000,000.00
1952 Fire	Fire Department, bond issue voted by citizens on November 4, 1952, $4,750,000.00
1954 Hospital	Hospital, bond issue voted by citizens on November 2, 1954, $5,830,000.00

1954 - Laguna Honda Home	Laguna Honda Home, bond issue voted by citizens on November 2, 1954, $5,475,000.00
1954 - Exhibit Hall	Civic Center Exhibit Hall bond issue voted by citizens on November 2, 1954 $3,275,000.00
1956 - Justice	New Hall of Justice bond issue voted by citizens on June 5, 1956, $19,475,000.00

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-1. NEW SCHOOL BUILDINGS					
Luther Burbank JHS (1354)					
M & K Corporation	11-9-55	11-5-57	$2,217,965.14	$570,341.00	
James A. Nelson Co.	11-9-55	11-5-57	413,566.97	120,727.97	1948 School
Scott-Buttner Elec.Co.,Inc.	11-9-55	11-5-57	197,755.90	59,727.90	
Ridgepoint No.2 Elem.School (1321-R)					
S. J. Amoroso Const. Co.	4-18-56	10-1-57	826,196.12	281,237.12	
Herman Lawson Co.	4-18-56	10-1-57	165,599.87	27,644.87	1948 School
Hampton Electric & Mfg. Co.	4-18-56	10-1-57	36,820.63	12,690.63	
Silver Avenue JHS (1415)					
Rothschild, Raffin & Weirick	11-9-56	97%	1,724,500.00	1,061,891.83	
Herman Lawson Co.	11-9-56	97%	344,483.00	230,317.51	General
Emil J. Weber Electric Co.	11-9-56	98%	132,289.00	97,797.69	
Commodore Stockton Elem. School Addition No. 2 (1483)					
Peter Sartorio	4-17-57	1-17-58	111,340.01	111,340.01	1948 School
	- - -		- - - -		
Starr King Elem School Addition (1565)					
McBroom & Cecchini	2-7-58	24%	285,200.00	30,667.00	1956 School
Silver Avenue JHS (1573)					
Cahill Construction Co.	3-19-58	3%	1,035,542.00	0	1956 School
J. O'Connell Voc. & Tech. Inst. New Gymnasium Bldg. (1589)					
Ira H. Larsen Co.	5-23-58	1%	264,611.00	0	1956 School

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-1. NEW SCHOOL BUILDINGS (continued)					
Balboa H.S. (Athletic Field Improvements, Proj. 119, HS Phys Ed.) (1618) Chas. L. Harney, Inc.	5-28-58	0	$ 26,400.00	0	1956 School
Total Awarded and Expended During Fiscal Year			$1,611,753.00	$2,604,383.53	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-2. MISCELLANEOUS ALTERATIONS					
City College of San Francisco (Science Bldg., New Electric Passenger Elevators) (1474) Otis Elevator Co.	1-11-57	10-14-57	$ 35,104.00	$ 35,104.00	1948 School
Polytechnic H.S. (Electronic Laboratory) (1470) Leon Carlen	2-27-57	9-13-57	47,140.00	21,640.00	1948 School
City College of San Francisco (Lab. Alter., Science Bldg.) (1484) Arthur W. Baum	4-26-57	1-14-58	78,916.17	78,916.17	1948 School
John Swett Elem. School (Window Replacement)(1506) L. J. McDermott	5-8-57	8-28-57	20,320.97	20,320.97	General
Commodore Sloat Elem. School (New Gutters & Toilet Rm. Alt.) (1515) L. J. McDermott	5-22-57	8-1-57	12,194.63	12,194.63	General
Galileo H.S. (Alter. Food Lab. Sew. Lab., & Counsel. Offices) (1519) H. E. Rahlmann	5-29-57	10-1-57	27,918.65	27,918.65	1948 School
James Lick JHS (Ext. Alter. & Window Replace.) (1514) Adam Arras & Son	5-29-57	5-29-57	56,125.00	56,125.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-2. MISCELLANEOUS ALTERATIONS (continued)					
(Heating Plant Conversions) Balboa HS, Lincoln Sherman-Gough Div., Admn. Bldg., Everett JHS, Adams, Roosevelt, B. Franklin JHS, Louis Lombard, Lowell HS, Lawton, Portola JHS, Sunnyside, & Glen Park Schools (1513-R) Robert M. Johnson	6-5-57	8-8-57	$ 23,540.40	$ 23,540.40	1948 School
John O'Connell Vocation. School (Kitchen & Plumb. Shop Alter.) (1516) William McIntosh & Son	6-19-57	9-20-57	5,929.49	5,929.49	General
Visitacion Valley Elem. School (Kitchen Alterations) (1529) Stenmark Construction Co.	6-28-57	10-25-57	13,156.00	13,056.00	1948 School
(Various Schools - General Repairs) Presidio & Everett JHS, Jefferson, Argonne, Guadalupe Elem. Schools (1535) William McIntosh & Son	7-24-57	10-16-57	6,007.21	6,007.21	General
Candlestick Cove School (New Covered Passageways) (1531) H. E. Rahlmann Co.	7-26-57	10-11-57	4,392.00	4,392.00	General
Bryant School (Demolition of Fire Escapes) (1545) Statewide Service, Inc.	7-26-57	9-12-57	385.00	385.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-2. MISCELLANEOUS ALTERATIONS (Continued)					
Mission H.S. (Repairs to Roof in Girls' Gymnasium) (1548) William McIntosh & Son	8-21-57	10-31-57	$ 5,380.00	$ 5,380.00	General
City College (Science Bldg., Alter. Registrar's Office) (1567) Stenmark Construction Co.	2-7-58	5-16-58	6,930.00	6,930.00	1948 School
City College (Relocation of Power Line (1593) Coopman Electric Co.	2-21-58	5-2-58	795.00	795.00	General
City College (New Underground Plumbing Facilities) (1588) Broadway Plumbing Co.	2-21-58	4-30-58	4,550.00	4,550.00	General
Spring Valley School (Exterior Alterations) (1581) Wm. McIntosh & Son	3-5-58	0	17,307.00	0	General
Mission H.S. (Alter. & Convert Heating Plant) (1584) Robert M. Johnson	3-5-58	10%	70,957.00	0	General
Jean Parker School (Retaining Wall and Fence) (1606) Ben Bearse	4-16-58	0	1,947.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-2. MISCELLANEOUS ALTERATIONS (Continued)					
Mission H.S. (Exterior Alterations) (1609) Wilco Construction Co.	4-16-58	0	$ 17,422.00	0	General
Commodore Stockton School (Exterior Reconstruction & Roof Repairs) (1597) R. J. Bergantz	4-18-58	0	14,896.00	0	General
Commodore Stockton School (Int. Alt., School Addition (1612) Wm. McIntosh & Son	4-23-58	0	1,680.00	0	General
Two Child Care Centers - Edison & Laguna-Golden Gate (Paint. & Plywood Siding Work) (1603) Crown Construction Co.	5-7-58	0	1,342.00	0	General
George Washington H.S. (Interior Communication System) (1623) F. A. Thomas Co., Inc.	5-23-58	0	7,029.00	0	General
Heating Plants, Alt. & Conv. (Roosevelt JHS, Sheridan, B. Franklin-Adult Div., E. R. Taylor, Farragut, F. McCoppin, Garfield, & J. Serra School) (1621) Broadway Plumbing Co.	5-23-58	0	40,975.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-2. MISCELLANEOUS ALTERATIONS (Continued)					
Horace Mann JHS (Alter. Girls' Gym. Area) (1615) Stenmark Construction Co.	6-6-58	0	$ 85,354.00	0	General
Portable Classrooms (Relocation from Denman JHS to Balboa H.S. & Portola JHS to Andrew Jackson) (1628) Lewis J. McDermott	6-18-58	0	20,966.00	0	General
Portable Classrooms (Relocation from F. Burk to A. Lincoln H.S., City College, & P. Revere Annex) (1630) H. E. Rahlmann Co.	6-25-58	0	57,126.00	0	General
Various Schools (Addn. of Window Vents- F. Burk School & L. Burbank JHS) (1635) DeNarde & Ganske	6-27-58	0	598.00	0	General
Total Awarded and Expended During Fiscal Year			$366,038.21	$323,184.52	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-3. ACOUSTICAL JOBS					
(Various Schools) Administration Bldg., Abraham Lincoln H S (1537) Acoustics, Inc. of Northern California	7-17-57	8-30-57	$ 1,919.00	$1,919.00	General
Administration Building (1600) Olson & Smith	3-28-58	6-4-58	1,340.00	1,340.00	General
Total Awarded and Expended During Fiscal Year			$ 3,259.00	$3,259.00	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-4. ROOFING JOBS					
Paul Revere School Annex (Re-roofing) (1520) Regal Roofing Co., Inc.	6-5-57	8-9-57	$ 3,387.00	$ 3,387.00	General
Sherman School (Re-roofing) (1528) San Francisco Roofing Co.	6-19-57	9-12-57	7,339.00	7,339.00	General
James Lick JHS (Re-roof. & Weatherproof.) (1525) Regal Roofing Co.	6-26-57	9-27-57	16,479.58	16,479.58	General
Polytechnic H.S. (Re-roof. & Weatherproof.) (1530) Bender Roofing Co.	7-10-57	10-11-57	8,092.00	8,092.00	General
Monroe School (Re-roof Portions of) (1536) Western Roofing Service	7-17-57	10-3-57	1,429.00	1,429.00	General
Pacific Heights School (Re-roof. & Weatherproof.) (1541) Alta Roofing Co.	8- 7-57	10-8-57	9,645.00	9,645.00	General
Mission H.S. (Re-roof. & Waterproof.) (1585) Regal Roofing Co., Inc.	3-19-58	0	26,411.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-4. ROOFING JOBS (Continued)					
Administration Bldg. (Re-roof. Portions of) (1627) Regal Roofing Co., Inc.	6-6-58	0	$ 7,243.00	0	General
Northridge Child Care Center (re-roofing) (1637) Cooper Bros. Roof. Co.	6-25-58	0	829.00	0	General
Child Care Centers (2) (Re-roof. Jefferson & Argonne Nurseries) (1636) Regal Roofing Company	6-25-58	0	847.00	0	General
Total Awarded and Expended During Fiscal Year			$54,496.00	$46,371.58	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-5. RESILIENT FLOORING					
Anza School (Cafeteria Reflooring & Baseboard Renewal) (1527) Wm. McIntosh & Son	6-26-57 - - -	9-13-57	$8,183.00 - - - -	$8,183.00	General
Commodore Stockton School, Child Care Center (new Resilient Flooring (1551) Stenmark Construction Co.	3- 5-58	0	3,097.00	0	General
Starr King School (Resilient Flooring) (1604) Floorcraft Contract Div.	4-16-58	0	8,490.00	0	General
(Various Schools - Floor Reconstruction) Balboa & Mission High Schools, Bryant, Cleveland, Laguna Honda, Sheridan, Francis S. Key and Excelsior (1619) Arthur W. Baum	5-14-58	0	20,311.00	0	General
Total Awarded and Expended During Fiscal Year			$31,898.00	$8,183.00	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-6. INTERIOR AND/OR EXTERIOR PAINTING					
(Various Schools - Painting Game Lines) Edison, McKinley, & Jefferson Schools (1504) Riley's Striping Service	4-3-57	7- 8-57	$ 850.00	$ 850.00	General
Argonne School (Interior Painting) (1457) M. A. Vidal Painting Co.	4-5-57	8-21-57	12,705.00	12,705.00	General
Commodore Sloat School (Interior Painting) (1494) M. A. Vidal Painting Co.	4-5-57	8-26-57	17,270.00	17,270.00	General
Bryant School (Interior & Exterior Painting) (1501) New Method Paint. & Dec.Co.	4-17-57	9-17-57	20,043.50	20,043.50	General
LeConte School (Interior Painting) (1507) W.G. Thompson	4-26-57	8-20-57	22,805.00	22,805.00	General
Junipero Serra School (Interior Painting (1509) Martin Fried	5-8-57	8-26-57	11,375.00	9,634.00	General
Sherman School (Interior & Exterior Painting) (1508) Fulton Painting Co.	5-8-57	8-26-57	23.720.00	23,720.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-6. INTERIOR AND/OR EXTERIOR PAINTING (Continued)					
Winfield Scott School (Interior & Exterior Painting) (1512) Deemer & Deemer	5 -8-57	8-26-57	$ 14,646.00	$ 14,646.00	General
George Peabody School (Interior Painting) (1511) Haney & Robertson	5 -8-57	8-26-57	11,009.42	11,009.42	General
(Various Schools - Painting Game Lines) Laguna Honda, L. Lombard, W. Scott, F.S. Key, Hillcrest, Marshall, S. B. Cooper (1539) The Empire Co.	7-24-57	9-11-57	1,279.00	1,279.00	General
(Various Schools - Painting Game Lines) Geary, Grant, Grattan, LeConte, Dudley Stone, Alvarado, G. Peabody, Ulloa (Annex) (1538) The Empire Co.	7-24-57	9-11-57	1,999.00	1,999.00	General
Six Child Care Centers - Potrero Terrace, Edison, Gough-Page, Jefferson, Laguna-Golden Gate, Northridge (1571) Manor Painters	1-17-58	5-13-58	3,512.75	3,512.75	General
Visitacion Valley School (Interior Painting) (1582) Robert A. Thompson	3 -5-58	0	13,400.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-6. INTERIOR AND/OR EXTERIOR PAINTING (Continued)					
Marina JHS (Interior Paint.) (1586) J. Wm. Sorenson	3-19-58	0	$32,456.00	0	General
Alvarado School (Interior & Exterior Painting) (1578-R) Robert A. Thompson	3-28-58	0	23,700.00	0	General
Lawton School (Interior Painting) (1599) Haney & Robertson	3-28-58	0	13,624.00	0	General
Paul Revere School (Interior & Exterior Painting) (1614) W. G. Thompson	5-7-58	0	13,320.00	0	General
Galileo H.S. (Interior Painting) (1608-R) D. Zelinsky & Sons	5-7-58	0	46,717.00	0	General
Balboa H.S. (Exterior Painting) (1617) W. G. Thompson	5-14-58	0	46,440.00	0	General
Geary Elem. School (Interior Painting) (1622) New Method Paint. & Decorating Co.	5-14-58	0	7,988.00	0	General
Administration Bldg. (Interior Painting of Cafeteria) (1605) Manor Painters	5-28-58	0	1,032.00	0	General
Total Awarded and Expended During Fiscal Year			$205,467.75	$139,473.67	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-7. YARD PAVING					
(Various Schools - Resurfacing Yard Paving, Heavy Application) Geary, Grant, Grattan, LeConte, Dudley Stone (1532) Malott & Peterson-Grundy	6-28-57	8-9-57	$ 8,175.00	$ 8,175.00	General
(Various Schools - Resurfacing Yard Paving, Heavy Application) Alvarado, George Peabody, Ulloa (old), Laguna Honda, L. Lombard (1533) Malott & Peterson-Grundy	7-10-57	8-28-57	17,543.00	17,543.00	General
(Various Schools - Resurfacing Yard Paving, Heavy Application) Winfield Scott, Francis Scott Key, Hillcrest, Morshall, S. B. Cooper (1534) Malott & Peterson-Grundy	7-10-57	8-28-57	12,311.00	12,311.00	General
(Various Schools-Resurfacing Yard Paving) Sherman, Edison, R. Weill, Cabrillo, Alamo (1624) Malott & Peterson-Grundy	6-6-58	0	12,978.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
A-7. YARD PAVING (Continued)					
(Various Schools - Resurfacing Yard Paving) James Lick JHS, Sunnyside, Com. Stockton, Paul Revere, Garfield, Starr King (1625) Malott & Peterson-Grundy	6-18-58	0	$17,916.00	0	General
(Various Schools - Resurfacing & Painting Game Lines) Cleveland and Five Others (1626) Malott & Peterson-Grundy	6-27-58	0	$29,703.00	0	General
Total Awarded and Expended During Fiscal Year			$90,451.00	$38,029.00	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
B-1. FIRE DEPARTMENT - NEW CONSTRUCTION					
Engine House No. 38, Project 20 (General Construction, Plumbing, Mechanical, and Electrical Work) (1435) M & K Corporation	8-22-56	9-6-57	$266,419.60	$65,755.60	1952 Fire
Engine House No. 13, Project 3 (General Construction, Plumbing, Mechanical, and Electrical Work) (1449) S. J. Amoroso Const. Co.	11-30-56	2-5-58	262,294.21	190,298.21	1952 Fire
Engine House No. 21, Project 5 (General Construction, Plumbing, Mechanical, and Electrical Work) (1561) Peter Sartorio	12-4-47	59%	182,511.00	100,837.00	1952 Fire
Total Awarded and Expended During Fiscal Year			$182,511.00	$356,890.81	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
B-2. FIRE DEPARTMENT - RECONSTRUCTION					
Engine House No. 47, Project 118 (General Construction, Plumbing, Mechanical and Electrical Work) (1452) Beacon Construction Co.	10-31-56	7-22-57	$56,072.90	$ 8,240.90	1952 Fire
Engine House No. 4, Project 112 (General Construction, Plumbing, Mechanical, and Electrical Work) (1377) Clovis Construction Co.	3-8-57	3-17-58	195,641.33	182,103.33	1952 Fire
Engine House No. 12, Project 2 (Gasoline Dispensing Pumps) (1510-R) Cooper Bros. Inc.	6-12-57	7-29-57	1,186.00	1,186.00	1952 Fire
Pump Station No. 1 (Exit Steel Stairs & Related Work, 2nd & Townsend Sts.) (R-1547) C. E. Toland & Sons	9-11-57	11-28-57	2,459.00	2,459.00	1952 Fire
Engine House No. 12, Project 2 (Screens, 2nd Floor Windows Drumm & Sacramento Sts.) (1557-R) Michel & Pfeffer Iron Works	11-20-57	4-9-58	1,485.00	1,485.00	1952 Fire

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
B-2. FIRE DEPARTMENT - RECONSTRUCTION (Continued)					
Engine House No. 24, Project 122 (General Construction and Electrical Work) (1575) Maurice L. Rosano, Inc.	3-12-58	99%	$15,233.00	$3,884.00	1952 Fire
Ashbury Tank (Tank Attendants' Quarters, 1234 Clayton St.) (1594) Thomas E. McCormick	4-30-58	95%	7,777.00	0	1952 Fire
Total Awarded and Expended During Fiscal Year			$26,954.00	$199,358.23	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C-1. DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital					
Alter Admit. Ward & Social Service (1381) Beacon Construction Co.	4-27-56	10-18-57	$ 276,894.02	$109,399.02	1954 Hosp.
Alter. Maternity Bldg. 80 (1425) Rothschild, Raffin & Weirick	6-20-56	4-18-58	820,887.10	407.558.10	1954 Hosp.
Elevator Work for Alter. to Maternity Bldg. 80 (1437) Westinghouse Electric Corp.	8-1-56	3-13-58	61,346.00	61,346.00	1954 Hosp.
Alt er. Special Diet Lab.(1444) Rothschild, Raffin & Weirkck	11-28-56	6-6-57	31,729.00	31,729.00	1954 Hosp.
Alter. & Add. to Cold Storage Facilities (1438) Stenmark Construction Co.	12-5-56	3-28-58	38,084.04	10,891.04	1954 Hosp.
Elevator #90-B Convert DC to AC, Psych. Bldg. 90 (1480-R) Otis Elevator Company	3-8-57	10-18-57	4,289.24	4,289.24	General
Elevator #90-A Convert DC to AC, Psych. Bldg. 90 (1481) Westinghouse Electric Corp.	4-5-57	11-15-57	6,497.00	6,497.00	General
TB Bldg. Modern., Proj. IV, Phase B (1500) William McIntosh & Son	6-7-57	4-10-58	419,221.81	419,221.81	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C-1. DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital (Continued)					
Fire Road Lighting, TB Bldg. Area (1523) Brayer Electric Company	6-12-57	9-6-57	$ 2,405.00	$ 2,405.00	General
Two Exit Stairways, Ward Bldg. No. 80, Bond Issue Proj. No. I, Phase III (1421-R) Engstrum & Nourse	7-10-57	3-21-58	91,606.17	91,606.17	1954 Hospital
TB Bldg. 50, Proj. IV, Phase B, Parts 2 and 3 (1521) William McIntosh & Son	10-18-57	32%	469,898.00	83,876.00	1954 Hospital
Miscellaneous Roof Repairs Receiving Bldg. & Morgue Bldg. Garage (1563) Bender Roofing Co.	11-1-57	1-15-58	2,791.00	2,791.00	General
Masonry Repointing & Weatherproofing, Matern. Bldg. 80 (1475) E. J. Finnerty & Son	11-22-57	4-25-58	9,849.91	9,849.91	General
New Passenger Elevator Connect. Corridors btw. Ward Bldgs. 20 and 30 (1569) Otis Elevator Co.	2-7-58	10%	32,426.00	0	1954 Hospital

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C-1. DEPARTMENT OF PUBLIC HEALTH San Francisco Hospital (Continued)					
General Construction, Locker Dress. Rms. & Connecting Corridors (1570) McBroom & Cecchini	2-7-58	30%	$233,391.00	$ 43,279.00	1954 Hospital
Cobalt Therapy Unit, General Construction of (1611) McBroom & Cecchini	6-25-58	0	35,785.00	0	1954 Hospital
Total Awarded and Expended During Fiscal Year			$875.747.08	$1,284,738.29	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C-2. DEPARTMENT OF PUBLIC HEALTH Laguna Honda Home					
Alterations to Clarendon Hall, Project 1 (1380) Rothschild, Raffin & Weirick	6-20-56	1-10-58	$1,463,003.64	$ 626,747.64	1954 LHH
Alterations to Ward Bldg. "A" Staff Offices & Related Work Project 6 (1408) Rothschild, Raffin & Weirick	6-22-56	8-15-57	247,023.53	40,153.53	1954 LHH
Alterations & Additions to Power Plant & Related Work Project No. 2 (1422) Rothschild, Raffin & Weirick	6-27-56	11-27-57	423,271.88	84,685.88	1954 LHH
Roads, Parking Areas & Service Buildings, Project 4 (1423) Hart & Hynding, Inc.	8-8-56	12-2-57	492,140.37	168,165.37	1954 LHH
Alterations to Ward Buildings "B" and Related Work (1505) Rothschild, Raffin & Weirick	5-15-57	4-28-57	160,308.74	160,308.74	General
Painting Wards "A" and "B" (1526) A. Quandt & Sons	6-14-57	3-26-58	17,840.00	17,840.00	General
Resilient Flooring Wards "A" and "B" (1524) The Brookman Co., Inc.	6-14-57	4-18-58	37,342.43	37,342.43	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
C-2.DEPARTMENT OF PUBLIC HEALTH Laguna Honda Home (Continued)					
Laundry Modernization, Project 7 (R-1518) S. J. Amoroso Construction Co.	9-13-57	99%	$ 136,970.00	$ 114,359.00	1954 LHH
Ward Bldgs. D & G Alterations Proj. 8 (R-1476) S. J. Amoroso Construction Co.	11-8-57	37%	565,479.00	204,072.00	1954 LHH
M & C Bldgs. & Related Work, Project 5 (1485) S. J. Amoroso Construction Co.	11-8-57	34%	394,927.00	146,398.00	1954 LHH
Ward Bldg. "C" & Related Work (1572) Stenmark Construction Co.	3-7-58	30%	151,871.00	25,734.00	General
Steam Mains & Related Work (1574) Adam Arras & Son	3-7-58	55%	128,701.00	39,104.00	General
Miscellaneous Alterations, Project "D" (1577) S.J. Amoroso Construction Co.	3-7-58	60%	42,172.00	12,781.00	General
Total Awarded and Expended During Fiscal Year			$1,420,120.00	$1,677.691.59	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
D-. M. H. deYOUNG MEMORIAL MUSEUM					
New Oakes Gallery (1486) Oscar Presco & Son	3-22-57	11-18-57	$ 15,552.28	$ 7,247.98	General
Skylight Ceiling Panels (1540) F. K. Pinney, Inc.	7-12-57	9-12-57	1,150.00	1,150.00	General
Miscellaneous Roof Repairs (1583) Bender Roofing Co.	2-21-58	5-8- 58	779.55	779.55	General
Alterations & Repair of Pneumatic Control Lines and Valves (1629-R) Johnson Service Co.	6-27-58	0	453.00	0	General
Total Awarded and Expended During Fiscal Year			$ 2,382.55	$ 9,177.53	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E- YOUTH GUIDANCE CENTER					
Log Cabin Ranch School for Boys, San Mateo Co. (Hog Pens & Drainage System for Livestock Facilities) (1495) Power, Mullin & Richardson Construction Co., Inc.	4-10-57	7-1-57	$ 5,090.90	$ 5,090.90	General
Youth Guidance Center (Exterior Paint. & Misc. Work) (1472-R) Eugene Stekler	4-10-57	8-15-57	26,895.00	20,036.00	General
Log Cabin Ranch School for Boys San Mateo Co. (General Const. of Dormitory, Proj. No. 2 (1492) Peter Sartorio	6-5-57	2-21-58	97,332.74	97,332.74	General
Youth Guidance Center (Insect Screens, Door Pulls, Threshholds & Kick Plates) (1549) Basil M. Bearse	8-21-57	1-6-58	1,463.00	1,463.00	General
Youth Guidance Center (Interior Plastering & Repairing Bldg. C-3) (1560) Wm. McIntosh & Son	12-18-57	3-19-58	4,432.00	4,432.00	General
Log Cabin Ranch School for Boys San Mateo Co. (Incinerator Work) (1562) Bay Cities Incinerator Co.	1-3-58	4-22-58	3,995.00	3,995.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
E- YOUTH GUIDANCE CENTER (Continued)					
Log Cabin School for Boys San Mateo Co. (General Grading for Master Plan Site) (1607) J. O. Archibald	5-16-58	0	$ 6,400.00	0	General
Total Awarded and Expended During Fiscal Year			$16,290.00	$132,349.64	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
F- CIVIC CENTER					
San Francisco Civic Center Exhibit Hall (1440) Theo. G. Meyer & Sons	8-29-56	6-27-58	$3,665,736.68	$2,512,985.68	1954 Ex.Hall
City Hall (Additions to Handrails) (1488) C. E. Toland & Son	3-13-57	8-27-57	4,765.00	4,765.00	General
Civic Auditorium (Elevator Repairs) (1517) Independent Elevator Co., Inc.	5-17-57	7-24-57	1,200.00	1,200.00	General
City Hall (Public Administrator Office Alterations, Superior Court Dept., Jury Room Alterations) (1491) Stenmark Construction Co.	6-5-57	2-13-58	11,177.84	11,177.84	General
Veterans Memorial Bldg. (Renewal of Ceiling Panels, SF Museum of Art) (1522) F. K. Pinney, Inc.	6-7-57	8-20-57	1,942.00	1,942.00	General
Civic Auditorium (Alterations to Exit Doors) (1493) William McIntosh & Sons	6-7-57	11-15-57	3,978.00	3,978.00	General
Main Library (New Hand Rails & Related Work) (1546) C. E. Toland & Son	8-16-57	10-21-57	2,650.00	2,650.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
F- CIVIC CENTER (Continued)					
City Hall (Traffic Fines Bureau Resilient Flooring) (1550) F. K. Pinney, Inc.	9-4-57	11-6-57	$1,238.00	$1,238.00	General
City Hall (Additions to Handrails, Phase II) (1556) Sartorius Company, Inc.	9-13-57	12-27-57	260.00	260.00	General
City Hall (Assessor's Office, Resilient Flooring) (1542) West Coast Linoleum & Carpet Co.	9-20-57	11-11-57	4,658.00	4,658.00	General
City Hall (Controller's Office Payroll Division, Ground Floor, Alterations) (1558) Leon Carlen	10-4-57	1-8-58	9,630.00	9,630.00	General
City Hall (Paint Exterior Ornamental Met al, 2nd Floor Balconies) (1568) D. Zelinsky & Sons	1-31-58	98%	7,065.00	2,975.00	General
Civic Auditorium (Miscel Work to Eliminate Fire Hazards) (1576) Fire-Free Services, Inc.	1-31-58	4-4-58	11,200.00	11,200.00	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
F- CIVIC CENTER (Continued)					
Civic Auditorium (Fourth Floor, Misc. Alterations for Retirement System) (1579) McGahey & Olson	3-7-58	6-4-58	$15,581.63	$15,581.63	General
Total Awarded and Expended During Fiscal Year			$52,282.63	$2,584,241.15	

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
G- MISCELLANEOUS					
California Academy of Sciences (Installation of Robert Howard Whale Statue in Courtyard) (1140-R2) Erbentraut & Summers	8-31-56	7-24-57	$ 18,868.50	$ 4,054.50	General
Merced Branch Library (General Construction of) (1487) Leon Carlen	4-5-57	10-29-57	120,326.13	109,234.13	General
California Palace of Legion of Honor (Acoustical Treatment Work) (1544) Fiberglas Corp.	8-2-57	9-13-57	2,890.00	2,890.00	General
Twin Peaks (Chain Link Security Fence, Auxiliary Reservoir) (1554) Colorado Fuel & Iron Corp.	9-11-57	12-2-57	2,882.00	2,882.00	General
150 Otis Street (Renovation of 9th Floor, Public Welfare) (1555) Stenmark Construction Co.	10-9-57	4-15-58	24,217.54	24,217.54	General
Hassler Health Home (Miscellaneous Fireproofing Work) ([illegible]) California Automatic Sprinkler	11-20-57	1-17-58	[illegible]	[illegible],116.72	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
G- MISCELLANEOUS (Continued)					
McCreery Branch Library (Demolition & Removal of) (1566) Cleveland Wrecking Co. of Cincinnati	12-13-57	2-5-58	$ 4,494.00	$ 4,494.00	General
North Beach Branch Library (General Construction of) (1564) Martinelli Construction Co.	3-7-58	35%	180,274.00	46,220.00	General
California Palace of Legion of Honor (Building Exterior Repairs) (1587) Arntz Bros.	3-19-58	41%	135,454.00	18,422.00	General
New Hall of Justice (General Excavation and Foundation Piling, Phase I) (1601) M & K Corporation	4-18-58	9%	889,000.00	0	General
Automotive Repair Shops for Purchasing Department (1595) Morris Daley	4-30-58	0	779,504.00	0	General
San Francisco Co. Jail No. 2 (Window Repairs, Men's Bldg.) (1613) Department of Public Works	5-7-58	0	6,542.60	0	General
Veterans' Memorial Bldg. (Steam Clean. & Gen. Rpr. of Ext.) (1602) Arthur W. Baum	6-11-58	0	24,237.00	0	General

CURRENT CONTRACT DATA 1957-1958

Description & Contractor	Awarded	Completed Date or %	Contract Amount	Amount Expended 1957-1958	Fund
G- MISCELLANEOUS (Continued)					
Veterans' Memorial Bldg. (Fabric Wall Covering, SF Museum of Art) (1632) Fred E. Turner Co.	6-18-58	0	$ 791.00	0	General
150 Otis Street (Misc. Acoustical Work, Public Welfare Department) (1644) F. K. Pinney, Inc.	6-27-58	0	1,692.00	0	General
Total Awarded and Expended During Fiscal Year			$2,060,094.86	$ 220,530.89	

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S.T.C.